



## **Arlington Zoning Board of Appeals**

**Date:** Tuesday, January 5, 2021  
**Time:** 7:30 PM  
**Location:** Conducted by remote participation  
**Additional Details:**

### **Agenda Items**

#### **Administrative Items**

##### **1. Remote Participation Details**

In accordance with the Governor's Order Suspending Certain Provisions of the Open Meeting Law, G. L. c. 30A, § 20 relating to the COVID-19 emergency, the Arlington Zoning Board of Appeals meetings shall be physically closed to the public to avoid group congregation until further notice. The meeting shall instead be held virtually using Zoom.

Please read Governor Baker's Executive Order Suspending Certain Provision of Open Meeting Law for more information regarding virtual public hearings and meetings: <https://www.mass.gov/doc/open-meeting-law-order-march-12-2020/download>

The Legal Department is inviting you to a scheduled Zoom meeting.  
Topic: Zoning Board of Appeals, Meeting/Hearing  
Time: January 5, 2021, 7:30 PM Eastern Time (US and Canada)

You are invited to a Zoom meeting.  
When: Jan 5, 2021 07:30 PM Eastern Time (US and Canada)  
Register in advance for this meeting:  
[https://town-arlington-ma-us.zoom.us/join/tJApduquqzopG9OIjgMDFZ7uWYH1HDEhb5\\_D](https://town-arlington-ma-us.zoom.us/join/tJApduquqzopG9OIjgMDFZ7uWYH1HDEhb5_D)  
After registering, you will receive a confirmation email containing information about joining the meeting.

##### **2. Members Vote: Approval of Meeting Minutes from December 22, 2020**

#### **Comprehensive Permits**



3. **1165R Massachusetts Avenue**
4. **1165R Massachusetts Avenue Correspondence**

**Meeting Adjourn**





## Town of Arlington, Massachusetts

### 1165R Massachusetts Avenue

#### ATTACHMENTS:

Type	File Name	Description
Reference Material	Last_Page_1165R_ZBA_Submission_120120.pdf	Last Page 1165R ZBA Submission_120120.pdf
Reference Material	Cover_Page_1165R_ZBA_Submission_120120.pdf	Cover Page 1165R ZBA Submission_120120.pdf
Reference Material	Appendix_Full.pdf	Appendix Full.pdf
Reference Material	13990.-Mirak_Mill_Apt-Traffic_Impact_Report_2020-07-06_[no_appendix].pdf	13990.-Mirak Mill Apt-Traffic Impact Report_2020-07-06 [no appendix].pdf
Reference Material	1165R_Massachusetts_Ave_ZBA_Submission_TOC_112420_Rev_120120.pdf	1165R Massachusetts Ave ZBA Submission TOC_112420_Rev_120120.pdf
Reference Material	3.2.18_List_of_Abutters_Combined.pdf	3.2.18 List of Abutters_Combined.pdf
Reference Material	3.2.17_Roster_of_Development_Team_Revised_120120_Combined.pdf	3.2.17 Roster of Development Team_Revised_120120_Combined.pdf
Reference Material	3.2.16_GOALS_AND_POLICIES_OF_THE_ARB_-_SPAULDING_(00082334x9C8B9)_Rev_113020.pdf	3.2.16 GOALS AND POLICIES OF THE ARB - SPAULDING (00082334x9C8B9)_Rev 113020.pdf
Reference Material	3.2.15_Impact_on_Municipal_Services_113020_Combined.pdf	3.2.15 Impact on Municipal Services_113020_Combined.pdf
Reference Material	3.2.13_Impact_Analysis_on_Natural___Built_Environment_102120_Revised_113020.pdf	3.2.13 Impact Analysis on Natural & Built Environment_102120_Revised_113020.pdf
Reference Material	3.2.12_Pro_Forma_Combined.pdf	3.2.12 Pro Forma_Combined.pdf
Reference Material	3.2.11_List_of_Requested_Waivers_Combined.pdf	3.2.11 List of Requested Waivers_Combined.pdf
Reference Material	3.2.10_Recreation___Open_Spaces_Revised_113020_Combined.pdf	3.2.10 Recreation & Open Spaces_Revised_113020_Combined.pdf
Reference Material	3.2.9_Utility_Plan_Combined.pdf	3.2.9 Utility Plan_Combined.pdf
Reference Material	3.2.8_Tabulation_of_Proposed_Buildings_Combined.pdf	3.2.8 Tabulation of Proposed Buildings_Combined.pdf
Reference Material	3.2.5.9_Wireless_Facilities.pdf	3.2.5.9 Wireless Facilities.pdf
Reference Material	3.2.5.8_On_Site_Power_Generation_Rev_113020.pdf	3.2.5.8 On Site Power Generation_Rev_113020.pdf
Reference Material	3.2.5.7_Photometric_Plan_Combined.pdf	3.2.5.7 Photometric Plan_Combined.pdf
Reference Material	3.2.5_-_3.2.5.6_Preliminary_Site_Development_Plans_Combined.pdf	3.2.5 - 3.2.5.6 Preliminary Site Development Plans_Combined.pdf
Reference Material	3.2.4_Site_Control_Combined.pdf	3.2.4 Site Control_Combined.pdf
Reference Material	3.2.3_Funding_Evidence_Subsidizing_Agency_Combined.pdf	3.2.3 Funding Evidence Subsidizing Agency_Combined.pdf
Reference Material	3.2.2_Limited_Dividend_Organization_Rev_113020.pdf	3.2.2 Limited Dividend Organization_Rev_113020.pdf
Reference Material	3.2.1_Title_Page_PEL_Combined.pdf	3.2.1 Title Page_PEL_Combined.pdf
Reference Material	3.2.6_Report_on_Exisiting_Site_Conditions_101520_Rev_113020_Combined.pdf	3.2.6 Report on Exisiting Site Conditions_101520_Rev_113020_Combined
Reference Material	3.2.7_Preliminary_Scaled_Arch_Dwgs_Combined.pdf	3.2.7 Preliminary Scaled Arch Dwgs_Combined.pdf





**End of Submission**



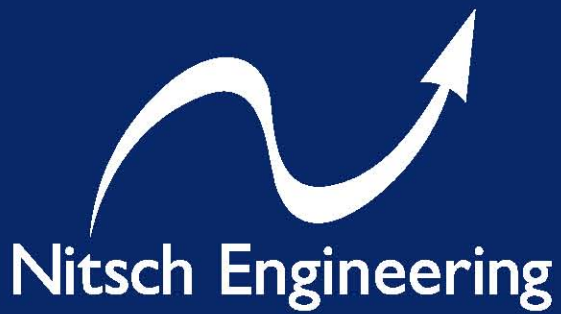


# The Redevelopment of 1165R Massachusetts Avenue, Arlington

**Chapter 40B** Submission to the Arlington Zoning Board of Appeals

December 1, 2020





# Traffic Impact Report *Appendix*

1165R Mass Ave Apartments  
1165R Massachusetts Avenue  
Arlington, MA

July 6, 2020

Prepared for:

1165R Mass MA Property LLC  
c/o Spaulding & Slye Investments  
One Post Office Square, 28<sup>th</sup> Floor  
Boston, MA 02109

Submitted by:

Nitsch Engineering  
2 Center Plaza, Suite 430  
Boston, MA 02108

Nitsch Engineering Project #13990.





Appendix A: Traffic Count Data





Location Map: 207450 Arlington, MA

Precision Data Industries, LLC 46 Morton Street, Framingham, MA 01702 ph: 508-875-0100 email: datarequests@pdillc.com



Client: Nitsch Engineering	Engineer: B. Zimolka	Site Code: TBD	Date: Tues 2/4-Wed 2/5/20	PDI Job # 207450	City, State: Arlington, MA
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Massachusetts Avenue  
west of Pine Court  
City, State: Arlington, MA  
Client: Nitsch Eng/B.Zimolka  
Site Code: TBD



PDI File # 207450 ATR A

Count Date: Tuesday, February 4, 2020  
Direction: EB

AM	Cars	Single Unit Heavy	Multi Unit Heavy	Total
12:00 AM	5	2	0	7
12:15 AM	6	1	0	7
12:30 AM	0	2	2	4
12:45 AM	4	2	0	6
1:00 AM	1	1	0	2
1:15 AM	4	0	0	4
1:30 AM	0	0	0	0
1:45 AM	1	1	0	2
2:00 AM	1	0	0	1
2:15 AM	2	0	0	2
2:30 AM	0	0	0	0
2:45 AM	1	1	0	2
3:00 AM	0	0	0	0
3:15 AM	0	0	0	0
3:30 AM	2	0	0	2
3:45 AM	3	1	1	5
4:00 AM	1	0	0	1
4:15 AM	3	0	1	4
4:30 AM	9	1	0	10
4:45 AM	4	1	0	5
5:00 AM	17	1	0	18
5:15 AM	16	3	0	19
5:30 AM	15	1	0	16
5:45 AM	17	5	0	22
6:00 AM	30	2	0	32
6:15 AM	55	3	2	60
6:30 AM	82	4	2	88
6:45 AM	102	6	0	108
7:00 AM	101	11	2	114
7:15 AM	110	4	2	116
7:30 AM	110	11	1	122
7:45 AM	131	10	1	142
8:00 AM	102	7	0	109
8:15 AM	99	9	1	109
8:30 AM	116	6	0	122
8:45 AM	113	7	0	120
9:00 AM	90	8	0	98
9:15 AM	116	5	0	121
9:30 AM	87	6	1	94
9:45 AM	106	5	0	111
10:00 AM	89	8	0	97
10:15 AM	73	5	1	79
10:30 AM	108	14	1	123
10:45 AM	90	8	0	98
11:00 AM	84	4	0	88
11:15 AM	97	9	0	106
11:30 AM	85	7	0	92
11:45 AM	89	6	1	96

AM Total	2377	188	19	2584
Percentage	91.99%	7.28%	0.74%	
AM Peak	7:15 AM	7:30 AM	6:15 AM	7:00 AM
Volume	453	37	6	494

PM	Cars	Single Unit Heavy	Multi Unit Heavy	Total
12:00 PM	119	6	0	125
12:15 PM	111	6	0	117
12:30 PM	135	6	0	141
12:45 PM	45	6	0	51
1:00 PM	1	1	0	2
1:15 PM	2	0	0	2
1:30 PM	1	4	0	5
1:45 PM	0	2	0	2
2:00 PM	0	2	0	2
2:15 PM	0	3	0	3
2:30 PM	15	5	0	20
2:45 PM	105	4	0	109
3:00 PM	114	2	1	117
3:15 PM	133	2	0	135
3:30 PM	123	6	0	129
3:45 PM	125	2	1	128
4:00 PM	124	4	0	128
4:15 PM	118	3	0	121
4:30 PM	128	1	1	130
4:45 PM	144	3	0	147
5:00 PM	124	3	0	127
5:15 PM	148	3	0	151
5:30 PM	160	2	0	162
5:45 PM	143	2	0	145
6:00 PM	131	3	0	134
6:15 PM	133	2	0	135
6:30 PM	138	1	0	139
6:45 PM	115	4	0	119
7:00 PM	100	4	0	104
7:15 PM	84	1	0	85
7:30 PM	75	3	0	78
7:45 PM	61	1	0	62
8:00 PM	66	4	0	70
8:15 PM	52	1	0	53
8:30 PM	59	2	0	61
8:45 PM	44	4	0	48
9:00 PM	44	3	0	47
9:15 PM	40	4	0	44
9:30 PM	30	3	0	33
9:45 PM	24	0	0	24
10:00 PM	23	4	0	27
10:15 PM	26	2	0	28
10:30 PM	20	1	0	21
10:45 PM	14	2	0	16
11:00 PM	9	2	0	11
11:15 PM	14	1	0	15
11:30 PM	6	3	0	9
11:45 PM	6	2	0	8

PM Total	3432	135	3	3570
Percentage	96.13%	3.78%	0.08%	
PM Peak	5:15 PM	12:00 PM	3:00 PM	5:15 PM
Volume	582	24	2	592

Day Total	5809	323	22	6154
Percentage	94.39%	5.25%	9 of 501	0.36%



Massachusetts Avenue  
west of Pine Court  
City, State: Arlington, MA  
Client: Nitsch Eng/B.Zimolka  
Site Code: TBD



PDI File # 207450 ATR A

Count Date: Wednesday, February 5, 2020  
Direction: EB

AM	Cars	Single Unit Heavy	Multi Unit Heavy	Total
12:00 AM	0	2	0	2
12:15 AM	7	1	0	8
12:30 AM	2	2	0	4
12:45 AM	3	2	0	5
1:00 AM	2	1	0	3
1:15 AM	2	0	0	2
1:30 AM	0	0	0	0
1:45 AM	1	0	0	1
2:00 AM	1	0	0	1
2:15 AM	1	0	0	1
2:30 AM	1	0	0	1
2:45 AM	1	0	0	1
3:00 AM	1	0	0	1
3:15 AM	0	0	0	0
3:30 AM	2	2	0	4
3:45 AM	1	0	1	2
4:00 AM	2	0	0	2
4:15 AM	7	0	0	7
4:30 AM	13	1	0	14
4:45 AM	2	1	0	3
5:00 AM	9	3	0	12
5:15 AM	16	2	1	19
5:30 AM	14	1	0	15
5:45 AM	16	3	0	19
6:00 AM	19	3	0	22
6:15 AM	55	2	0	57
6:30 AM	73	6	0	79
6:45 AM	96	18	0	114
7:00 AM	111	9	1	121
7:15 AM	114	5	0	119
7:30 AM	113	4	0	117
7:45 AM	113	4	1	118
8:00 AM	98	5	1	104
8:15 AM	130	4	0	134
8:30 AM	128	4	1	133
8:45 AM	104	6	1	111
9:00 AM	109	2	0	111
9:15 AM	116	8	1	125
9:30 AM	102	6	0	108
9:45 AM	101	8	0	109
10:00 AM	99	5	2	106
10:15 AM	71	7	0	78
10:30 AM	102	5	0	107
10:45 AM	99	4	0	103
11:00 AM	77	5	0	82
11:15 AM	106	3	0	109
11:30 AM	121	4	0	125
11:45 AM	103	5	0	108

PM	Cars	Single Unit Heavy	Multi Unit Heavy	Total
12:00 PM	107	5	0	112
12:15 PM	123	5	1	129
12:30 PM	128	5	0	133
12:45 PM	116	5	0	121
1:00 PM	102	7	0	109
1:15 PM	103	6	1	110
1:30 PM	100	9	0	109
1:45 PM	106	4	0	110
2:00 PM	90	6	0	96
2:15 PM	103	7	0	110
2:30 PM	95	5	0	100
2:45 PM	103	7	0	110
3:00 PM	128	7	0	135
3:15 PM	134	8	0	142
3:30 PM	106	7	0	113
3:45 PM	118	5	0	123
4:00 PM	119	9	2	130
4:15 PM	129	6	0	135
4:30 PM	129	6	0	135
4:45 PM	124	2	0	126
5:00 PM	150	3	0	153
5:15 PM	123	2	0	125
5:30 PM	155	2	0	157
5:45 PM	148	2	0	150
6:00 PM	146	4	0	150
6:15 PM	126	5	0	131
6:30 PM	111	3	0	114
6:45 PM	113	7	0	120
7:00 PM	93	3	0	96
7:15 PM	99	1	0	100
7:30 PM	71	5	0	76
7:45 PM	56	2	0	58
8:00 PM	73	4	0	77
8:15 PM	60	3	0	63
8:30 PM	65	1	0	66
8:45 PM	53	4	0	57
9:00 PM	48	2	0	50
9:15 PM	33	2	0	35
9:30 PM	22	4	0	26
9:45 PM	24	1	0	25
10:00 PM	18	4	0	22
10:15 PM	24	1	0	25
10:30 PM	13	0	0	13
10:45 PM	17	4	0	21
11:00 PM	10	2	0	12
11:15 PM	5	1	0	6
11:30 PM	8	3	0	11
11:45 PM	3	1	1	5

AM Total 2464 153 10 2627  
Percentage 93.80% 5.82% 0.38%  
AM Peak 8:15 AM 6:30 AM 7:45 AM 7:45 AM  
Volume 471 38 3 489

PM Total 4130 197 5 4332  
Percentage 95.34% 4.55% 0.12%  
PM Peak 5:00 PM 2:45 PM 3:15 PM 5:30 PM  
Volume 576 29 2 588

Day Total 6594 350 15 6959  
Percentage 94.75% 5.03% 10 of 501 0.22%



Massachusetts Avenue  
west of Pine Court  
City, State: Arlington, MA  
Client: Nitsch Eng/B.Zimolka  
Site Code: TBD



PDI File # 207450 ATR A

Count Date: Tuesday, February 4, 2020  
Direction: WB

AM	Cars	Single Unit Heavy	Multi Unit Heavy	Total
12:00 AM	6	2	0	8
12:15 AM	7	1	0	8
12:30 AM	3	1	0	4
12:45 AM	2	2	0	4
1:00 AM	2	1	0	3
1:15 AM	0	0	1	1
1:30 AM	0	2	0	2
1:45 AM	0	0	0	0
2:00 AM	2	0	0	2
2:15 AM	0	0	0	0
2:30 AM	1	0	0	1
2:45 AM	0	0	0	0
3:00 AM	0	0	0	0
3:15 AM	1	0	0	1
3:30 AM	1	0	1	2
3:45 AM	1	0	0	1
4:00 AM	1	0	0	1
4:15 AM	3	0	0	3
4:30 AM	7	1	0	8
4:45 AM	9	0	0	9
5:00 AM	10	4	0	14
5:15 AM	17	3	0	20
5:30 AM	22	1	1	24
5:45 AM	28	3	0	31
6:00 AM	29	1	0	30
6:15 AM	32	5	3	40
6:30 AM	38	1	0	39
6:45 AM	69	6	0	75
7:00 AM	85	11	0	96
7:15 AM	74	7	0	81
7:30 AM	130	7	0	137
7:45 AM	139	5	1	145
8:00 AM	145	7	0	152
8:15 AM	100	3	1	104
8:30 AM	97	9	0	106
8:45 AM	124	7	1	132
9:00 AM	95	8	0	103
9:15 AM	78	8	1	87
9:30 AM	91	3	0	94
9:45 AM	98	10	1	109
10:00 AM	88	3	1	92
10:15 AM	90	7	0	97
10:30 AM	75	4	0	79
10:45 AM	90	11	0	101
11:00 AM	93	10	1	104
11:15 AM	82	4	1	87
11:30 AM	107	3	0	110
11:45 AM	106	5	2	113

AM Total	2278	166	16	2460
Percentage	92.60%	6.75%	0.65%	
AM Peak	7:30 AM	8:30 AM	5:30 AM	7:30 AM
Volume	514	32	4	538

PM	Cars	Single Unit Heavy	Multi Unit Heavy	Total
12:00 PM	112	6	1	119
12:15 PM	106	5	0	111
12:30 PM	103	7	0	110
12:45 PM	93	6	0	99
1:00 PM	4	2	1	7
1:15 PM	11	6	0	17
1:30 PM	8	2	1	11
1:45 PM	8	3	0	11
2:00 PM	6	3	1	10
2:15 PM	5	5	0	10
2:30 PM	20	1	0	21
2:45 PM	108	8	1	117
3:00 PM	116	4	0	120
3:15 PM	124	6	0	130
3:30 PM	97	3	0	100
3:45 PM	116	5	0	121
4:00 PM	117	3	0	120
4:15 PM	96	2	0	98
4:30 PM	109	3	0	112
4:45 PM	112	2	0	114
5:00 PM	113	7	1	121
5:15 PM	98	1	0	99
5:30 PM	98	1	0	99
5:45 PM	122	3	0	125
6:00 PM	123	1	0	124
6:15 PM	84	3	0	87
6:30 PM	103	3	1	107
6:45 PM	84	4	0	88
7:00 PM	97	0	0	97
7:15 PM	77	2	0	79
7:30 PM	88	3	1	92
7:45 PM	75	0	0	75
8:00 PM	72	4	0	76
8:15 PM	56	1	0	57
8:30 PM	71	5	0	76
8:45 PM	43	2	0	45
9:00 PM	65	2	0	67
9:15 PM	42	3	0	45
9:30 PM	38	2	0	40
9:45 PM	27	2	0	29
10:00 PM	24	4	0	28
10:15 PM	20	1	0	21
10:30 PM	23	1	0	24
10:45 PM	16	1	0	17
11:00 PM	14	1	0	15
11:15 PM	7	2	0	9
11:30 PM	5	1	0	6
11:45 PM	7	2	0	9

PM Total	3163	144	8	3315
Percentage	95.41%	4.34%	0.24%	
PM Peak	3:15 PM	12:00 PM	12:45 PM	3:00 PM
Volume	454	24	2	471

Day Total	5441	310	24	5775
Percentage	94.22%	5.37%	11 of 501	0.42%



Massachusetts Avenue  
west of Pine Court  
City, State: Arlington, MA  
Client: Nitsch Eng/B.Zimolka  
Site Code: TBD



PDI File # 207450 ATR A

Count Date: Wednesday, February 5, 2020  
Direction: WB

AM	Cars	Single Unit Heavy	Multi Unit Heavy	Total
12:00 AM	4	2	0	6
12:15 AM	2	1	0	3
12:30 AM	2	2	1	5
12:45 AM	1	1	0	2
1:00 AM	4	1	0	5
1:15 AM	2	0	0	2
1:30 AM	1	0	0	1
1:45 AM	2	1	0	3
2:00 AM	0	0	0	0
2:15 AM	1	0	0	1
2:30 AM	1	0	0	1
2:45 AM	0	0	0	0
3:00 AM	1	0	0	1
3:15 AM	2	0	0	2
3:30 AM	1	0	0	1
3:45 AM	0	0	0	0
4:00 AM	2	0	0	2
4:15 AM	1	0	0	1
4:30 AM	6	1	0	7
4:45 AM	7	1	1	9
5:00 AM	10	3	0	13
5:15 AM	12	1	0	13
5:30 AM	23	1	0	24
5:45 AM	20	2	0	22
6:00 AM	23	4	1	28
6:15 AM	34	5	1	40
6:30 AM	35	3	0	38
6:45 AM	67	11	1	79
7:00 AM	78	3	0	81
7:15 AM	90	7	1	98
7:30 AM	129	5	0	134
7:45 AM	148	5	0	153
8:00 AM	143	1	1	145
8:15 AM	110	5	1	116
8:30 AM	122	4	1	127
8:45 AM	106	5	0	111
9:00 AM	104	12	0	116
9:15 AM	80	12	1	93
9:30 AM	90	7	2	99
9:45 AM	97	8	1	106
10:00 AM	97	2	0	99
10:15 AM	82	7	0	89
10:30 AM	87	3	0	90
10:45 AM	89	4	0	93
11:00 AM	84	8	1	93
11:15 AM	91	5	0	96
11:30 AM	99	4	0	103
11:45 AM	105	5	0	110

AM Total	2295	152	14	2461
Percentage	93.25%	6.18%	0.57%	
AM Peak	7:30 AM	9:00 AM	9:00 AM	7:30 AM
Volume	530	39	4	548

PM	Cars	Single Unit Heavy	Multi Unit Heavy	Total
12:00 PM	99	8	0	107
12:15 PM	125	5	1	131
12:30 PM	100	4	1	105
12:45 PM	109	9	0	118
1:00 PM	105	4	0	109
1:15 PM	106	5	0	111
1:30 PM	113	10	0	123
1:45 PM	95	5	0	100
2:00 PM	113	5	0	118
2:15 PM	103	10	0	113
2:30 PM	141	2	0	143
2:45 PM	130	7	0	137
3:00 PM	129	12	0	141
3:15 PM	113	6	2	121
3:30 PM	126	6	0	132
3:45 PM	106	8	0	114
4:00 PM	119	1	0	120
4:15 PM	123	5	0	128
4:30 PM	98	5	1	104
4:45 PM	113	1	0	114
5:00 PM	126	5	0	131
5:15 PM	126	2	0	128
5:30 PM	113	4	0	117
5:45 PM	111	3	0	114
6:00 PM	114	2	0	116
6:15 PM	87	6	0	93
6:30 PM	92	7	0	99
6:45 PM	92	4	0	96
7:00 PM	82	2	0	84
7:15 PM	84	2	0	86
7:30 PM	62	5	0	67
7:45 PM	51	1	0	52
8:00 PM	70	3	0	73
8:15 PM	69	3	0	72
8:30 PM	72	2	1	75
8:45 PM	55	2	0	57
9:00 PM	59	2	0	61
9:15 PM	44	4	0	48
9:30 PM	28	1	0	29
9:45 PM	26	3	0	29
10:00 PM	23	2	0	25
10:15 PM	22	1	0	23
10:30 PM	12	1	0	13
10:45 PM	26	2	0	28
11:00 PM	11	1	0	12
11:15 PM	7	2	0	9
11:30 PM	3	2	0	5
11:45 PM	7	2	0	9

PM Total	3940	194	6	4140
Percentage	95.17%	4.69%	0.14%	
PM Peak	2:30 PM	3:00 PM	12:00 PM	2:30 PM
Volume	513	32	2	542

Day Total	6235	346	20	6601
Percentage	94.46%	5.24%	12 of 501	0.30%



Massachusetts Avenue  
west of Pine Court  
City, State: Arlington, MA  
Client: Nitsch Eng/B.Zimolka  
Site Code: TBD



PDI File # 207450 ATR A

Direction: EB

### Weekly Report

Day Date	Tuesday 02/04/20		Wednesday 02/05/20												Week Ave	
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
12:00	7	125	2	112	0	0	0	0	0	0	0	0	0	0	5	119
12:15	7	117	8	129	0	0	0	0	0	0	0	0	0	0	8	123
12:30	4	141	4	133	0	0	0	0	0	0	0	0	0	0	4	137
12:45	6	51	5	121	0	0	0	0	0	0	0	0	0	0	6	86
1:00	2	2	3	109	0	0	0	0	0	0	0	0	0	0	3	56
1:15	4	2	2	110	0	0	0	0	0	0	0	0	0	0	3	56
1:30	0	5	0	109	0	0	0	0	0	0	0	0	0	0	0	57
1:45	2	2	1	110	0	0	0	0	0	0	0	0	0	0	2	56
2:00	1	2	1	96	0	0	0	0	0	0	0	0	0	0	1	49
2:15	2	3	1	110	0	0	0	0	0	0	0	0	0	0	2	57
2:30	0	20	1	100	0	0	0	0	0	0	0	0	0	0	1	60
2:45	2	109	1	110	0	0	0	0	0	0	0	0	0	0	2	110
3:00	0	117	1	135	0	0	0	0	0	0	0	0	0	0	1	126
3:15	0	135	0	142	0	0	0	0	0	0	0	0	0	0	0	139
3:30	2	129	4	113	0	0	0	0	0	0	0	0	0	0	3	121
3:45	5	128	2	123	0	0	0	0	0	0	0	0	0	0	4	126
4:00	1	128	2	130	0	0	0	0	0	0	0	0	0	0	2	129
4:15	4	121	7	135	0	0	0	0	0	0	0	0	0	0	6	128
4:30	10	130	14	135	0	0	0	0	0	0	0	0	0	0	12	133
4:45	5	147	3	126	0	0	0	0	0	0	0	0	0	0	4	137
5:00	18	127	12	153	0	0	0	0	0	0	0	0	0	0	15	140
5:15	19	151	19	125	0	0	0	0	0	0	0	0	0	0	19	138
5:30	16	162	15	157	0	0	0	0	0	0	0	0	0	0	16	160
5:45	22	145	19	150	0	0	0	0	0	0	0	0	0	0	21	148
6:00	32	134	22	150	0	0	0	0	0	0	0	0	0	0	27	142
6:15	60	135	57	131	0	0	0	0	0	0	0	0	0	0	59	133
6:30	88	139	79	114	0	0	0	0	0	0	0	0	0	0	84	127
6:45	108	119	114	120	0	0	0	0	0	0	0	0	0	0	111	120
7:00	114	104	121	96	0	0	0	0	0	0	0	0	0	0	118	100
7:15	116	85	119	100	0	0	0	0	0	0	0	0	0	0	118	93
7:30	122	78	117	76	0	0	0	0	0	0	0	0	0	0	120	77
7:45	142	62	118	58	0	0	0	0	0	0	0	0	0	0	130	60
8:00	109	70	104	77	0	0	0	0	0	0	0	0	0	0	107	74
8:15	109	53	134	63	0	0	0	0	0	0	0	0	0	0	122	58
8:30	122	61	133	66	0	0	0	0	0	0	0	0	0	0	128	64
8:45	120	48	111	57	0	0	0	0	0	0	0	0	0	0	116	53
9:00	98	47	111	50	0	0	0	0	0	0	0	0	0	0	105	49
9:15	121	44	125	35	0	0	0	0	0	0	0	0	0	0	123	40
9:30	94	33	108	26	0	0	0	0	0	0	0	0	0	0	101	30
9:45	111	24	109	25	0	0	0	0	0	0	0	0	0	0	110	25
10:00	97	27	106	22	0	0	0	0	0	0	0	0	0	0	102	25
10:15	79	28	78	25	0	0	0	0	0	0	0	0	0	0	79	27
10:30	123	21	107	13	0	0	0	0	0	0	0	0	0	0	115	17
10:45	98	16	103	21	0	0	0	0	0	0	0	0	0	0	101	19
11:00	88	11	82	12	0	0	0	0	0	0	0	0	0	0	85	12
11:15	106	15	109	6	0	0	0	0	0	0	0	0	0	0	108	11
11:30	92	9	125	11	0	0	0	0	0	0	0	0	0	0	109	10
11:45	96	8	108	5	0	0	0	0	0	0	0	0	0	0	102	7
Total	2584	3570	2627	4332	0	0	0	0	0	0	0	0	0	0	2606	3951
Day Total	6154		6959		0		0		0		0		0		6557	
Peak HR	7:00 AM	5:15 PM	7:45 AM	5:30 PM												
Volume	494	592	489	588											486	587



Massachusetts Avenue  
west of Pine Court  
City, State: Arlington, MA  
Client: Nitsch Eng/B.Zimolka  
Site Code: TBD



PDI File # 207450 ATR A

Direction: WB

### Weekly Report

Day Date	Tuesday 02/04/20		Wednesday 02/05/20												Week Ave	
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
12:00	8	119	6	107	0	0	0	0	0	0	0	0	0	0	7	113
12:15	8	111	3	131	0	0	0	0	0	0	0	0	0	0	6	121
12:30	4	110	5	105	0	0	0	0	0	0	0	0	0	0	5	108
12:45	4	99	2	118	0	0	0	0	0	0	0	0	0	0	3	109
1:00	3	7	5	109	0	0	0	0	0	0	0	0	0	0	4	58
1:15	1	17	2	111	0	0	0	0	0	0	0	0	0	0	2	64
1:30	2	11	1	123	0	0	0	0	0	0	0	0	0	0	2	67
1:45	0	11	3	100	0	0	0	0	0	0	0	0	0	0	2	56
2:00	2	10	0	118	0	0	0	0	0	0	0	0	0	0	1	64
2:15	0	10	1	113	0	0	0	0	0	0	0	0	0	0	1	62
2:30	1	21	1	143	0	0	0	0	0	0	0	0	0	0	1	82
2:45	0	117	0	137	0	0	0	0	0	0	0	0	0	0	0	127
3:00	0	120	1	141	0	0	0	0	0	0	0	0	0	0	1	131
3:15	1	130	2	121	0	0	0	0	0	0	0	0	0	0	2	126
3:30	2	100	1	132	0	0	0	0	0	0	0	0	0	0	2	116
3:45	1	121	0	114	0	0	0	0	0	0	0	0	0	0	1	118
4:00	1	120	2	120	0	0	0	0	0	0	0	0	0	0	2	120
4:15	3	98	1	128	0	0	0	0	0	0	0	0	0	0	2	113
4:30	8	112	7	104	0	0	0	0	0	0	0	0	0	0	8	108
4:45	9	114	9	114	0	0	0	0	0	0	0	0	0	0	9	114
5:00	14	121	13	131	0	0	0	0	0	0	0	0	0	0	14	126
5:15	20	99	13	128	0	0	0	0	0	0	0	0	0	0	17	114
5:30	24	99	24	117	0	0	0	0	0	0	0	0	0	0	24	108
5:45	31	125	22	114	0	0	0	0	0	0	0	0	0	0	27	120
6:00	30	124	28	116	0	0	0	0	0	0	0	0	0	0	29	120
6:15	40	87	40	93	0	0	0	0	0	0	0	0	0	0	40	90
6:30	39	107	38	99	0	0	0	0	0	0	0	0	0	0	39	103
6:45	75	88	79	96	0	0	0	0	0	0	0	0	0	0	77	92
7:00	96	97	81	84	0	0	0	0	0	0	0	0	0	0	89	91
7:15	81	79	98	86	0	0	0	0	0	0	0	0	0	0	90	83
7:30	137	92	134	67	0	0	0	0	0	0	0	0	0	0	136	80
7:45	145	75	153	52	0	0	0	0	0	0	0	0	0	0	149	64
8:00	152	76	145	73	0	0	0	0	0	0	0	0	0	0	149	75
8:15	104	57	116	72	0	0	0	0	0	0	0	0	0	0	110	65
8:30	106	76	127	75	0	0	0	0	0	0	0	0	0	0	117	76
8:45	132	45	111	57	0	0	0	0	0	0	0	0	0	0	122	51
9:00	103	67	116	61	0	0	0	0	0	0	0	0	0	0	110	64
9:15	87	45	93	48	0	0	0	0	0	0	0	0	0	0	90	47
9:30	94	40	99	29	0	0	0	0	0	0	0	0	0	0	97	35
9:45	109	29	106	29	0	0	0	0	0	0	0	0	0	0	108	29
10:00	92	28	99	25	0	0	0	0	0	0	0	0	0	0	96	27
10:15	97	21	89	23	0	0	0	0	0	0	0	0	0	0	93	22
10:30	79	24	90	13	0	0	0	0	0	0	0	0	0	0	85	19
10:45	101	17	93	28	0	0	0	0	0	0	0	0	0	0	97	23
11:00	104	15	93	12	0	0	0	0	0	0	0	0	0	0	99	14
11:15	87	9	96	9	0	0	0	0	0	0	0	0	0	0	92	9
11:30	110	6	103	5	0	0	0	0	0	0	0	0	0	0	107	6
11:45	113	9	110	9	0	0	0	0	0	0	0	0	0	0	112	9
Total Day Total	2460 5775	3315	2461 6601	4140	0 0	0	0 0	0	0 0	0 0	0	0 0	0 0	0	2461 6188	3728
Peak HR	7:30 AM	3:00 PM	7:30 AM	2:30 PM												
Volume	538	471	548	542											543	499



Mirak Mill West Driveway  
North of Massachusetts Ave  
City, State: Arlington, MA  
Client: Nitsch Eng/B.Zimolka  
Site Code: TBD



PDI File #

207450 B

Count Date: Tuesday, February 4, 2020  
Direction: NB

AM	Cars	Single Unit Heavy	Multi Unit Heavy	Total
12:00 AM	0	0	0	0
12:15 AM	0	0	0	0
12:30 AM	0	0	0	0
12:45 AM	0	0	0	0
1:00 AM	0	0	0	0
1:15 AM	0	0	0	0
1:30 AM	0	0	0	0
1:45 AM	0	0	0	0
2:00 AM	1	0	0	1
2:15 AM	0	0	0	0
2:30 AM	0	0	0	0
2:45 AM	0	0	0	0
3:00 AM	0	0	0	0
3:15 AM	0	0	0	0
3:30 AM	0	0	0	0
3:45 AM	0	0	0	0
4:00 AM	0	0	0	0
4:15 AM	0	0	0	0
4:30 AM	0	0	0	0
4:45 AM	0	0	0	0
5:00 AM	0	0	0	0
5:15 AM	1	0	0	1
5:30 AM	0	0	0	0
5:45 AM	3	0	0	3
6:00 AM	6	0	0	6
6:15 AM	0	0	0	0
6:30 AM	1	0	0	1
6:45 AM	1	0	0	1
7:00 AM	2	0	0	2
7:15 AM	4	0	0	4
7:30 AM	5	0	0	5
7:45 AM	5	0	0	5
8:00 AM	6	0	0	6
8:15 AM	11	0	0	11
8:30 AM	5	0	0	5
8:45 AM	6	0	0	6
9:00 AM	12	0	0	12
9:15 AM	8	1	0	9
9:30 AM	5	1	0	6
9:45 AM	10	1	0	11
10:00 AM	5	0	0	5
10:15 AM	2	0	0	2
10:30 AM	7	0	0	7
10:45 AM	6	0	0	6
11:00 AM	5	0	0	5
11:15 AM	4	0	0	4
11:30 AM	4	0	0	4
11:45 AM	7	0	0	7

AM Total	132	3	0	135
Percentage	97.78%	2.22%	0.00%	
AM Peak	9:00 AM	9:00 AM	12:00 AM	9:00 AM
Volume	35	3	0	38

PM	Cars	Single Unit Heavy	Multi Unit Heavy	Total
12:00 PM	3	0	0	3
12:15 PM	5	0	0	5
12:30 PM	3	1	0	4
12:45 PM	4	0	0	4
1:00 PM	6	1	1	8
1:15 PM	6	0	0	6
1:30 PM	6	0	0	6
1:45 PM	11	0	0	11
2:00 PM	3	0	0	3
2:15 PM	7	1	0	8
2:30 PM	4	1	0	5
2:45 PM	2	0	0	2
3:00 PM	3	0	0	3
3:15 PM	2	0	0	2
3:30 PM	1	0	0	1
3:45 PM	2	0	0	2
4:00 PM	2	0	0	2
4:15 PM	1	0	0	1
4:30 PM	3	0	0	3
4:45 PM	2	0	0	2
5:00 PM	4	0	0	4
5:15 PM	2	0	0	2
5:30 PM	1	0	0	1
5:45 PM	1	0	0	1
6:00 PM	2	0	0	2
6:15 PM	1	0	0	1
6:30 PM	4	0	0	4
6:45 PM	2	0	0	2
7:00 PM	2	0	0	2
7:15 PM	2	0	0	2
7:30 PM	1	0	0	1
7:45 PM	0	0	0	0
8:00 PM	0	0	0	0
8:15 PM	0	0	0	0
8:30 PM	1	0	0	1
8:45 PM	0	0	0	0
9:00 PM	3	0	0	3
9:15 PM	0	0	0	0
9:30 PM	0	0	0	0
9:45 PM	0	0	0	0
10:00 PM	1	0	0	1
10:15 PM	0	0	0	0
10:30 PM	2	0	0	2
10:45 PM	0	0	0	0
11:00 PM	0	0	0	0
11:15 PM	0	0	0	0
11:30 PM	0	0	0	0
11:45 PM	0	0	0	0

PM Total	105	4	1	110
Percentage	95.45%	3.64%	0.91%	
PM Peak	1:00 PM	12:15 PM	12:15 PM	1:00 PM
Volume	29	2	1	31

Day Total	237	7	1	245
Percentage	96.73%	2.86%	15 of 501	0.41%



Mirak Mill West Driveway  
North of Massachusetts Ave  
City, State: Arlington, MA  
Client: Nitsch Eng/B.Zimolka  
Site Code: TBD



PDI File #

207450 B

Count Date: Wednesday, February 5, 2020  
Direction: NB

AM	Cars	Single Unit Heavy	Multi Unit Heavy	Total
12:00 AM	0	0	0	0
12:15 AM	0	0	0	0
12:30 AM	0	0	0	0
12:45 AM	0	0	0	0
1:00 AM	0	0	0	0
1:15 AM	0	0	0	0
1:30 AM	0	0	0	0
1:45 AM	0	0	0	0
2:00 AM	0	0	0	0
2:15 AM	0	0	0	0
2:30 AM	0	0	0	0
2:45 AM	0	0	0	0
3:00 AM	0	0	0	0
3:15 AM	0	0	0	0
3:30 AM	0	0	0	0
3:45 AM	0	0	0	0
4:00 AM	0	0	0	0
4:15 AM	0	0	0	0
4:30 AM	0	0	0	0
4:45 AM	0	0	0	0
5:00 AM	0	0	0	0
5:15 AM	0	0	0	0
5:30 AM	1	0	0	1
5:45 AM	5	0	0	5
6:00 AM	6	0	0	6
6:15 AM	0	0	0	0
6:30 AM	1	0	0	1
6:45 AM	3	0	0	3
7:00 AM	4	0	0	4
7:15 AM	4	0	0	4
7:30 AM	1	0	0	1
7:45 AM	4	0	0	4
8:00 AM	8	0	0	8
8:15 AM	8	0	0	8
8:30 AM	8	1	0	9
8:45 AM	16	0	0	16
9:00 AM	15	0	0	15
9:15 AM	6	0	0	6
9:30 AM	8	0	0	8
9:45 AM	2	0	0	2
10:00 AM	3	2	0	5
10:15 AM	1	0	0	1
10:30 AM	2	0	0	2
10:45 AM	2	1	0	3
11:00 AM	5	0	0	5
11:15 AM	2	0	0	2
11:30 AM	7	0	0	7
11:45 AM	1	0	0	1

AM Total	123	4	0	127
Percentage	96.85%	3.15%	0.00%	
AM Peak	8:15 AM	10:00 AM	12:00 AM	8:15 AM
Volume	47	3	0	48

PM	Cars	Single Unit Heavy	Multi Unit Heavy	Total
12:00 PM	3	0	0	3
12:15 PM	7	0	0	7
12:30 PM	7	1	0	8
12:45 PM	3	0	0	3
1:00 PM	9	0	0	9
1:15 PM	6	0	0	6
1:30 PM	5	0	0	5
1:45 PM	10	0	0	10
2:00 PM	3	0	0	3
2:15 PM	3	0	0	3
2:30 PM	2	0	0	2
2:45 PM	2	0	0	2
3:00 PM	6	0	0	6
3:15 PM	2	0	0	2
3:30 PM	7	0	0	7
3:45 PM	4	0	0	4
4:00 PM	5	0	0	5
4:15 PM	3	0	0	3
4:30 PM	2	0	0	2
4:45 PM	2	0	0	2
5:00 PM	0	0	0	0
5:15 PM	4	0	0	4
5:30 PM	3	0	0	3
5:45 PM	2	0	0	2
6:00 PM	1	0	0	1
6:15 PM	2	0	0	2
6:30 PM	1	0	0	1
6:45 PM	0	0	0	0
7:00 PM	2	0	0	2
7:15 PM	1	0	0	1
7:30 PM	2	0	0	2
7:45 PM	3	0	0	3
8:00 PM	1	0	0	1
8:15 PM	1	0	0	1
8:30 PM	1	0	0	1
8:45 PM	2	0	0	2
9:00 PM	0	0	0	0
9:15 PM	2	0	0	2
9:30 PM	0	0	0	0
9:45 PM	1	0	0	1
10:00 PM	0	0	0	0
10:15 PM	0	0	0	0
10:30 PM	0	0	0	0
10:45 PM	0	0	0	0
11:00 PM	0	0	0	0
11:15 PM	1	0	0	1
11:30 PM	0	0	0	0
11:45 PM	0	0	0	0

PM Total	121	1	0	122
Percentage	99.18%	0.82%	0.00%	
PM Peak	1:00 PM	12:00 PM	12:00 PM	1:00 PM
Volume	30	1	0	30

Day Total	244	5	0	249
Percentage	97.99%	2.01%	0.00%	16 of 501



Mirak Mill West Driveway  
North of Massachusetts Ave  
City, State: Arlington, MA  
Client: Nitsch Eng/B.Zimolka  
Site Code: TBD



PDI File #

207450 B

Count Date: Tuesday, February 4, 2020  
Direction: SB

AM	Cars	Single Unit Heavy	Multi Unit Heavy	Total
12:00 AM	0	0	0	0
12:15 AM	0	0	0	0
12:30 AM	0	0	0	0
12:45 AM	0	0	0	0
1:00 AM	0	0	0	0
1:15 AM	0	0	0	0
1:30 AM	0	0	0	0
1:45 AM	0	0	0	0
2:00 AM	0	0	0	0
2:15 AM	0	0	0	0
2:30 AM	0	0	0	0
2:45 AM	0	0	0	0
3:00 AM	0	0	0	0
3:15 AM	0	0	0	0
3:30 AM	0	0	0	0
3:45 AM	0	0	0	0
4:00 AM	0	0	0	0
4:15 AM	0	0	0	0
4:30 AM	0	0	0	0
4:45 AM	0	0	0	0
5:00 AM	0	0	0	0
5:15 AM	1	0	0	1
5:30 AM	0	0	0	0
5:45 AM	1	0	0	1
6:00 AM	0	0	0	0
6:15 AM	2	0	0	2
6:30 AM	0	0	0	0
6:45 AM	1	0	0	1
7:00 AM	1	0	0	1
7:15 AM	1	0	0	1
7:30 AM	1	0	0	1
7:45 AM	2	0	0	2
8:00 AM	2	0	0	2
8:15 AM	0	0	0	0
8:30 AM	0	0	0	0
8:45 AM	2	0	0	2
9:00 AM	1	0	0	1
9:15 AM	3	0	0	3
9:30 AM	2	1	0	3
9:45 AM	1	0	0	1
10:00 AM	1	0	0	1
10:15 AM	1	0	0	1
10:30 AM	2	1	0	3
10:45 AM	0	0	0	0
11:00 AM	6	0	0	6
11:15 AM	2	0	0	2
11:30 AM	3	1	0	4
11:45 AM	4	0	0	4

AM Total	40	3	0	43
Percentage	93.02%	6.98%	0.00%	
AM Peak	11:00 AM	8:45 AM	12:00 AM	11:00 AM
Volume	15	1	0	16

PM	Cars	Single Unit Heavy	Multi Unit Heavy	Total
12:00 PM	3	0	0	3
12:15 PM	5	0	0	5
12:30 PM	9	0	0	9
12:45 PM	7	0	0	7
1:00 PM	10	0	0	10
1:15 PM	2	0	0	2
1:30 PM	6	0	0	6
1:45 PM	5	0	0	5
2:00 PM	1	0	0	1
2:15 PM	8	0	0	8
2:30 PM	6	0	0	6
2:45 PM	3	0	0	3
3:00 PM	5	0	0	5
3:15 PM	5	0	0	5
3:30 PM	4	0	0	4
3:45 PM	9	0	0	9
4:00 PM	4	0	0	4
4:15 PM	3	0	0	3
4:30 PM	8	0	0	8
4:45 PM	8	0	0	8
5:00 PM	11	0	0	11
5:15 PM	2	0	0	2
5:30 PM	5	1	0	6
5:45 PM	5	0	0	5
6:00 PM	7	0	0	7
6:15 PM	3	0	0	3
6:30 PM	2	0	0	2
6:45 PM	8	0	0	8
7:00 PM	1	0	0	1
7:15 PM	3	0	0	3
7:30 PM	4	0	0	4
7:45 PM	2	0	0	2
8:00 PM	4	0	0	4
8:15 PM	0	0	0	0
8:30 PM	0	0	0	0
8:45 PM	0	0	0	0
9:00 PM	0	0	0	0
9:15 PM	0	0	0	0
9:30 PM	0	0	0	0
9:45 PM	0	0	0	0
10:00 PM	0	0	0	0
10:15 PM	2	0	0	2
10:30 PM	0	0	0	0
10:45 PM	1	0	0	1
11:00 PM	0	0	0	0
11:15 PM	1	0	0	1
11:30 PM	0	0	0	0
11:45 PM	0	0	0	0

PM Total	172	1	0	173
Percentage	99.42%	0.58%	0.00%	
PM Peak	12:15 PM	4:45 PM	12:00 PM	12:15 PM
Volume	31	1	0	31

Day Total	212	4	0	216
Percentage	98.15%	1.85%	0.00%	17 of 501



Mirak Mill West Driveway  
North of Massachusetts Ave  
City, State: Arlington, MA  
Client: Nitsch Eng/B.Zimolka  
Site Code: TBD



PDI File # 207450 B

Count Date: Wednesday, February 5, 2020  
Direction: SB

AM	Cars	Single Unit Heavy	Multi Unit Heavy	Total
12:00 AM	0	0	0	0
12:15 AM	0	0	0	0
12:30 AM	0	0	0	0
12:45 AM	0	0	0	0
1:00 AM	0	0	0	0
1:15 AM	0	0	0	0
1:30 AM	0	0	0	0
1:45 AM	0	0	0	0
2:00 AM	0	0	0	0
2:15 AM	0	0	0	0
2:30 AM	0	0	0	0
2:45 AM	0	0	0	0
3:00 AM	0	0	0	0
3:15 AM	0	0	0	0
3:30 AM	0	0	0	0
3:45 AM	0	0	0	0
4:00 AM	0	0	0	0
4:15 AM	0	0	0	0
4:30 AM	0	0	0	0
4:45 AM	0	0	0	0
5:00 AM	0	0	0	0
5:15 AM	0	0	0	0
5:30 AM	0	0	0	0
5:45 AM	0	0	0	0
6:00 AM	2	0	0	2
6:15 AM	4	0	0	4
6:30 AM	1	0	0	1
6:45 AM	1	0	0	1
7:00 AM	0	0	0	0
7:15 AM	0	0	0	0
7:30 AM	1	0	0	1
7:45 AM	1	0	0	1
8:00 AM	0	0	0	0
8:15 AM	3	0	0	3
8:30 AM	4	0	0	4
8:45 AM	1	0	0	1
9:00 AM	3	0	0	3
9:15 AM	2	0	0	2
9:30 AM	2	0	0	2
9:45 AM	1	0	0	1
10:00 AM	2	2	0	4
10:15 AM	1	0	0	1
10:30 AM	4	0	0	4
10:45 AM	1	0	0	1
11:00 AM	4	0	0	4
11:15 AM	4	0	0	4
11:30 AM	3	0	0	3
11:45 AM	3	0	0	3

AM Total	48	2	0	50
Percentage	96.00%	4.00%	0.00%	
AM Peak	11:00 AM	9:15 AM	12:00 AM	11:00 AM
Volume	14	2	0	14

PM	Cars	Single Unit Heavy	Multi Unit Heavy	Total
12:00 PM	5	0	0	5
12:15 PM	10	0	0	10
12:30 PM	4	1	0	5
12:45 PM	9	0	0	9
1:00 PM	6	0	0	6
1:15 PM	1	0	0	1
1:30 PM	2	0	0	2
1:45 PM	5	0	0	5
2:00 PM	4	0	0	4
2:15 PM	3	0	0	3
2:30 PM	4	0	0	4
2:45 PM	3	0	0	3
3:00 PM	7	0	0	7
3:15 PM	5	0	0	5
3:30 PM	4	0	0	4
3:45 PM	4	0	0	4
4:00 PM	7	0	0	7
4:15 PM	6	0	0	6
4:30 PM	13	0	0	13
4:45 PM	9	0	0	9
5:00 PM	3	0	0	3
5:15 PM	8	0	0	8
5:30 PM	8	0	0	8
5:45 PM	3	0	0	3
6:00 PM	10	0	0	10
6:15 PM	3	0	0	3
6:30 PM	1	0	0	1
6:45 PM	2	0	0	2
7:00 PM	1	0	0	1
7:15 PM	2	0	0	2
7:30 PM	1	0	0	1
7:45 PM	1	0	0	1
8:00 PM	2	0	0	2
8:15 PM	3	0	0	3
8:30 PM	1	0	0	1
8:45 PM	1	0	0	1
9:00 PM	1	0	0	1
9:15 PM	0	0	0	0
9:30 PM	2	0	0	2
9:45 PM	0	0	0	0
10:00 PM	1	0	0	1
10:15 PM	0	0	0	0
10:30 PM	0	0	0	0
10:45 PM	0	0	0	0
11:00 PM	1	0	0	1
11:15 PM	1	0	0	1
11:30 PM	0	0	0	0
11:45 PM	0	0	0	0

PM Total	167	1	0	168
Percentage	99.40%	0.60%	0.00%	
PM Peak	4:00 PM	12:00 PM	12:00 PM	4:00 PM
Volume	35	1	0	35

Day Total	215	3	0	218
Percentage	98.62%	1.38%	0.00%	18 of 501



Mirak Mill West Driveway  
North of Massachusetts Ave  
City, State: Arlington, MA  
Client: Nitsch Eng/B.Zimolka  
Site Code: TBD



PDI File # 207450 B

Direction: NB

### Weekly Report

Day Date	Tuesday 02/04/20		Wednesday 02/05/20												Week Ave	
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
12:00	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0	3
12:15	0	5	0	7	0	0	0	0	0	0	0	0	0	0	0	6
12:30	0	4	0	8	0	0	0	0	0	0	0	0	0	0	0	6
12:45	0	4	0	3	0	0	0	0	0	0	0	0	0	0	0	4
1:00	0	8	0	9	0	0	0	0	0	0	0	0	0	0	0	9
1:15	0	6	0	6	0	0	0	0	0	0	0	0	0	0	0	6
1:30	0	6	0	5	0	0	0	0	0	0	0	0	0	0	0	6
1:45	0	11	0	10	0	0	0	0	0	0	0	0	0	0	0	11
2:00	1	3	0	3	0	0	0	0	0	0	0	0	0	0	1	3
2:15	0	8	0	3	0	0	0	0	0	0	0	0	0	0	0	6
2:30	0	5	0	2	0	0	0	0	0	0	0	0	0	0	0	4
2:45	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	2
3:00	0	3	0	6	0	0	0	0	0	0	0	0	0	0	0	5
3:15	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	2
3:30	0	1	0	7	0	0	0	0	0	0	0	0	0	0	0	4
3:45	0	2	0	4	0	0	0	0	0	0	0	0	0	0	0	3
4:00	0	2	0	5	0	0	0	0	0	0	0	0	0	0	0	4
4:15	0	1	0	3	0	0	0	0	0	0	0	0	0	0	0	2
4:30	0	3	0	2	0	0	0	0	0	0	0	0	0	0	0	3
4:45	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	2
5:00	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	2
5:15	1	2	0	4	0	0	0	0	0	0	0	0	0	0	1	3
5:30	0	1	1	3	0	0	0	0	0	0	0	0	0	0	1	2
5:45	3	1	5	2	0	0	0	0	0	0	0	0	0	0	4	2
6:00	6	2	6	1	0	0	0	0	0	0	0	0	0	0	6	2
6:15	0	1	0	2	0	0	0	0	0	0	0	0	0	0	0	2
6:30	1	4	1	1	0	0	0	0	0	0	0	0	0	0	1	3
6:45	1	2	3	0	0	0	0	0	0	0	0	0	0	0	2	1
7:00	2	2	4	2	0	0	0	0	0	0	0	0	0	0	3	2
7:15	4	2	4	1	0	0	0	0	0	0	0	0	0	0	4	2
7:30	5	1	1	2	0	0	0	0	0	0	0	0	0	0	3	2
7:45	5	0	4	3	0	0	0	0	0	0	0	0	0	0	5	2
8:00	6	0	8	1	0	0	0	0	0	0	0	0	0	0	7	1
8:15	11	0	8	1	0	0	0	0	0	0	0	0	0	0	10	1
8:30	5	1	9	1	0	0	0	0	0	0	0	0	0	0	7	1
8:45	6	0	16	2	0	0	0	0	0	0	0	0	0	0	11	1
9:00	12	3	15	0	0	0	0	0	0	0	0	0	0	0	14	2
9:15	9	0	6	2	0	0	0	0	0	0	0	0	0	0	8	1
9:30	6	0	8	0	0	0	0	0	0	0	0	0	0	0	7	0
9:45	11	0	2	1	0	0	0	0	0	0	0	0	0	0	7	1
10:00	5	1	5	0	0	0	0	0	0	0	0	0	0	0	5	1
10:15	2	0	1	0	0	0	0	0	0	0	0	0	0	0	2	0
10:30	7	2	2	0	0	0	0	0	0	0	0	0	0	0	5	1
10:45	6	0	3	0	0	0	0	0	0	0	0	0	0	0	5	0
11:00	5	0	5	0	0	0	0	0	0	0	0	0	0	0	5	0
11:15	4	0	2	1	0	0	0	0	0	0	0	0	0	0	3	1
11:30	4	0	7	0	0	0	0	0	0	0	0	0	0	0	6	0
11:45	7	0	1	0	0	0	0	0	0	0	0	0	0	0	4	0
Total	135	110	127	122	0	0	0	0	0	0	0	0	0	0	131	116
Day Total	245		249		0		0		0		0		0		247	
Peak HR	9:00 AM	1:00 PM	8:15 AM	1:00 PM												
Volume	38	31	48	30											41	31



Mirak Mill West Driveway  
North of Massachusetts Ave  
City, State: Arlington, MA  
Client: Nitsch Eng/B.Zimolka  
Site Code: TBD



PDI File # 207450 B

Direction: SB

## Weekly Report

Day Date	Tuesday 02/04/20		Wednesday 02/05/20												Week Ave	
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
12:00	0	3	0	5	0	0	0	0	0	0	0	0	0	0	0	4
12:15	0	5	0	10	0	0	0	0	0	0	0	0	0	0	0	8
12:30	0	9	0	5	0	0	0	0	0	0	0	0	0	0	0	7
12:45	0	7	0	9	0	0	0	0	0	0	0	0	0	0	0	8
1:00	0	10	0	6	0	0	0	0	0	0	0	0	0	0	0	8
1:15	0	2	0	1	0	0	0	0	0	0	0	0	0	0	0	2
1:30	0	6	0	2	0	0	0	0	0	0	0	0	0	0	0	4
1:45	0	5	0	5	0	0	0	0	0	0	0	0	0	0	0	5
2:00	0	1	0	4	0	0	0	0	0	0	0	0	0	0	0	3
2:15	0	8	0	3	0	0	0	0	0	0	0	0	0	0	0	6
2:30	0	6	0	4	0	0	0	0	0	0	0	0	0	0	0	5
2:45	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0	3
3:00	0	5	0	7	0	0	0	0	0	0	0	0	0	0	0	6
3:15	0	5	0	5	0	0	0	0	0	0	0	0	0	0	0	5
3:30	0	4	0	4	0	0	0	0	0	0	0	0	0	0	0	4
3:45	0	9	0	4	0	0	0	0	0	0	0	0	0	0	0	7
4:00	0	4	0	7	0	0	0	0	0	0	0	0	0	0	0	6
4:15	0	3	0	6	0	0	0	0	0	0	0	0	0	0	0	5
4:30	0	8	0	13	0	0	0	0	0	0	0	0	0	0	0	11
4:45	0	8	0	9	0	0	0	0	0	0	0	0	0	0	0	9
5:00	0	11	0	3	0	0	0	0	0	0	0	0	0	0	0	7
5:15	1	2	0	8	0	0	0	0	0	0	0	0	0	0	1	5
5:30	0	6	0	8	0	0	0	0	0	0	0	0	0	0	0	7
5:45	1	5	0	3	0	0	0	0	0	0	0	0	0	0	1	4
6:00	0	7	2	10	0	0	0	0	0	0	0	0	0	0	1	9
6:15	2	3	4	3	0	0	0	0	0	0	0	0	0	0	3	3
6:30	0	2	1	1	0	0	0	0	0	0	0	0	0	0	1	2
6:45	1	8	1	2	0	0	0	0	0	0	0	0	0	0	1	5
7:00	1	1	0	1	0	0	0	0	0	0	0	0	0	0	1	1
7:15	1	3	0	2	0	0	0	0	0	0	0	0	0	0	1	3
7:30	1	4	1	1	0	0	0	0	0	0	0	0	0	0	1	3
7:45	2	2	1	1	0	0	0	0	0	0	0	0	0	0	2	2
8:00	2	4	0	2	0	0	0	0	0	0	0	0	0	0	1	3
8:15	0	0	3	3	0	0	0	0	0	0	0	0	0	0	2	2
8:30	0	0	4	1	0	0	0	0	0	0	0	0	0	0	2	1
8:45	2	0	1	1	0	0	0	0	0	0	0	0	0	0	2	1
9:00	1	0	3	1	0	0	0	0	0	0	0	0	0	0	2	1
9:15	3	0	2	0	0	0	0	0	0	0	0	0	0	0	3	0
9:30	3	0	2	2	0	0	0	0	0	0	0	0	0	0	3	1
9:45	1	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0
10:00	1	0	4	1	0	0	0	0	0	0	0	0	0	0	3	1
10:15	1	2	1	0	0	0	0	0	0	0	0	0	0	0	1	1
10:30	3	0	4	0	0	0	0	0	0	0	0	0	0	0	4	0
10:45	0	1	1	0	0	0	0	0	0	0	0	0	0	0	1	1
11:00	6	0	4	1	0	0	0	0	0	0	0	0	0	0	5	1
11:15	2	1	4	1	0	0	0	0	0	0	0	0	0	0	3	1
11:30	4	0	3	0	0	0	0	0	0	0	0	0	0	0	4	0
11:45	4	0	3	0	0	0	0	0	0	0	0	0	0	0	4	0
Total	43	173	50	168	0	0	0	0	0	0	0	0	0	0	47	171
Day Total	216		218		0		0		0		0		0		217	
Peak HR	11:00 AM	12:15 PM	11:00 AM	4:00 PM												
Volume	16	31	14	35											15	31



Quinn Road (East Driveway)  
north of Massachusetts Ave  
City, State: Arlington, MA  
Client: Nitsch Eng/B.Zimolka  
Site Code: TBD



PDI File #

207450 C

Count Date: Tuesday, February 4, 2020  
Direction: NB

AM	Cars	Single Unit Heavy	Multi Unit Heavy	Total
12:00 AM	0	0	0	0
12:15 AM	0	0	0	0
12:30 AM	0	0	0	0
12:45 AM	0	0	0	0
1:00 AM	0	0	0	0
1:15 AM	0	0	0	0
1:30 AM	0	0	0	0
1:45 AM	0	0	0	0
2:00 AM	0	0	0	0
2:15 AM	0	0	0	0
2:30 AM	0	0	0	0
2:45 AM	0	0	0	0
3:00 AM	0	0	0	0
3:15 AM	0	0	0	0
3:30 AM	0	0	0	0
3:45 AM	0	0	0	0
4:00 AM	0	0	0	0
4:15 AM	0	0	0	0
4:30 AM	0	0	0	0
4:45 AM	0	0	0	0
5:00 AM	0	0	0	0
5:15 AM	1	0	0	1
5:30 AM	0	0	0	0
5:45 AM	1	0	0	1
6:00 AM	1	0	0	1
6:15 AM	6	0	0	6
6:30 AM	0	0	0	0
6:45 AM	6	0	0	6
7:00 AM	4	1	0	5
7:15 AM	8	1	0	9
7:30 AM	4	0	0	4
7:45 AM	11	0	0	11
8:00 AM	13	0	0	13
8:15 AM	6	1	0	7
8:30 AM	4	0	0	4
8:45 AM	7	0	0	7
9:00 AM	9	1	0	10
9:15 AM	10	0	0	10
9:30 AM	1	0	0	1
9:45 AM	8	2	0	10
10:00 AM	10	0	0	10
10:15 AM	4	0	0	4
10:30 AM	7	3	0	10
10:45 AM	4	2	0	6
11:00 AM	2	0	0	2
11:15 AM	8	0	0	8
11:30 AM	7	0	0	7
11:45 AM	4	0	0	4

AM Total	146	11	0	157
Percentage	92.99%	7.01%	0.00%	
AM Peak	7:15 AM	9:45 AM	12:00 AM	7:15 AM
Volume	36	5	0	37

PM	Cars	Single Unit Heavy	Multi Unit Heavy	Total
12:00 PM	9	1	0	10
12:15 PM	5	0	0	5
12:30 PM	7	0	0	7
12:45 PM	20	3	0	23
1:00 PM	1	0	1	2
1:15 PM	1	0	0	1
1:30 PM	0	0	0	0
1:45 PM	0	0	0	0
2:00 PM	0	0	0	0
2:15 PM	0	0	1	1
2:30 PM	0	1	0	1
2:45 PM	4	0	0	4
3:00 PM	2	0	1	3
3:15 PM	4	0	0	4
3:30 PM	4	0	0	4
3:45 PM	2	0	0	2
4:00 PM	3	0	0	3
4:15 PM	3	0	0	3
4:30 PM	3	0	0	3
4:45 PM	3	0	0	3
5:00 PM	3	0	0	3
5:15 PM	2	0	0	2
5:30 PM	3	0	0	3
5:45 PM	1	0	0	1
6:00 PM	1	0	0	1
6:15 PM	0	0	0	0
6:30 PM	0	0	0	0
6:45 PM	1	0	0	1
7:00 PM	0	0	0	0
7:15 PM	1	0	0	1
7:30 PM	1	0	0	1
7:45 PM	1	0	0	1
8:00 PM	2	0	0	2
8:15 PM	0	0	0	0
8:30 PM	0	0	0	0
8:45 PM	0	0	0	0
9:00 PM	0	0	0	0
9:15 PM	0	1	0	1
9:30 PM	0	0	0	0
9:45 PM	0	0	0	0
10:00 PM	1	0	0	1
10:15 PM	0	0	0	0
10:30 PM	0	0	0	0
10:45 PM	1	0	0	1
11:00 PM	0	0	0	0
11:15 PM	0	0	0	0
11:30 PM	0	0	0	0
11:45 PM	0	0	0	0

PM Total	89	6	3	98
Percentage	90.82%	6.12%	3.06%	
PM Peak	12:00 PM	12:00 PM	2:15 PM	12:00 PM
Volume	41	4	2	45

Day Total	235	17	3	255
Percentage	92.16%	6.67%	21 of 501	1.18%



Quinn Road (East Driveway)  
north of Massachusetts Ave  
City, State: Arlington, MA  
Client: Nitsch Eng/B.Zimolka  
Site Code: TBD



PDI File #

207450 C

Count Date: Wednesday, February 5, 2020  
Direction: NB

AM	Cars	Single Unit Heavy	Multi Unit Heavy	Total
12:00 AM	0	0	0	0
12:15 AM	0	0	0	0
12:30 AM	0	0	0	0
12:45 AM	0	0	0	0
1:00 AM	0	0	0	0
1:15 AM	0	0	0	0
1:30 AM	0	0	0	0
1:45 AM	0	0	0	0
2:00 AM	0	0	0	0
2:15 AM	0	0	0	0
2:30 AM	0	0	0	0
2:45 AM	0	0	0	0
3:00 AM	0	0	0	0
3:15 AM	0	0	0	0
3:30 AM	0	0	0	0
3:45 AM	0	0	0	0
4:00 AM	1	0	0	1
4:15 AM	0	0	0	0
4:30 AM	0	0	0	0
4:45 AM	0	0	0	0
5:00 AM	0	0	0	0
5:15 AM	0	0	0	0
5:30 AM	0	0	0	0
5:45 AM	1	0	0	1
6:00 AM	1	0	0	1
6:15 AM	7	0	0	7
6:30 AM	9	0	0	9
6:45 AM	7	1	0	8
7:00 AM	7	1	0	8
7:15 AM	6	0	0	6
7:30 AM	4	0	0	4
7:45 AM	3	0	0	3
8:00 AM	9	0	2	11
8:15 AM	7	1	0	8
8:30 AM	3	1	0	4
8:45 AM	12	1	0	13
9:00 AM	8	0	0	8
9:15 AM	9	0	0	9
9:30 AM	11	1	0	12
9:45 AM	6	0	0	6
10:00 AM	4	1	0	5
10:15 AM	5	1	0	6
10:30 AM	2	0	0	2
10:45 AM	0	0	0	0
11:00 AM	7	0	0	7
11:15 AM	8	0	0	8
11:30 AM	5	0	1	6
11:45 AM	7	1	0	8

AM Total	149	9	3	161
Percentage	92.55%	5.59%	1.86%	
AM Peak	8:45 AM	8:00 AM	7:15 AM	8:45 AM
Volume	40	3	2	42

PM	Cars	Single Unit Heavy	Multi Unit Heavy	Total
12:00 PM	4	0	0	4
12:15 PM	5	0	0	5
12:30 PM	7	0	0	7
12:45 PM	10	0	0	10
1:00 PM	6	1	0	7
1:15 PM	3	1	0	4
1:30 PM	8	0	0	8
1:45 PM	11	0	0	11
2:00 PM	4	0	0	4
2:15 PM	5	2	0	7
2:30 PM	5	0	1	6
2:45 PM	2	0	0	2
3:00 PM	5	0	0	5
3:15 PM	7	0	0	7
3:30 PM	4	0	0	4
3:45 PM	2	0	0	2
4:00 PM	4	0	0	4
4:15 PM	4	0	0	4
4:30 PM	1	0	0	1
4:45 PM	1	0	0	1
5:00 PM	2	0	0	2
5:15 PM	4	0	0	4
5:30 PM	3	0	0	3
5:45 PM	1	0	0	1
6:00 PM	0	0	0	0
6:15 PM	0	0	0	0
6:30 PM	1	0	0	1
6:45 PM	2	0	0	2
7:00 PM	0	0	0	0
7:15 PM	2	0	0	2
7:30 PM	1	0	0	1
7:45 PM	3	0	0	3
8:00 PM	1	0	0	1
8:15 PM	0	0	0	0
8:30 PM	0	0	0	0
8:45 PM	1	0	0	1
9:00 PM	0	0	0	0
9:15 PM	0	0	0	0
9:30 PM	0	0	0	0
9:45 PM	1	0	0	1
10:00 PM	0	0	0	0
10:15 PM	0	0	0	0
10:30 PM	0	0	0	0
10:45 PM	0	0	0	0
11:00 PM	0	0	0	0
11:15 PM	0	0	0	0
11:30 PM	0	0	0	0
11:45 PM	0	0	0	0

PM Total	120	4	1	125
Percentage	96.00%	3.20%	0.80%	
PM Peak	12:15 PM	12:30 PM	1:45 PM	1:00 PM
Volume	28	2	1	30

Day Total	269	13	4	286
Percentage	94.06%	4.55%	22 of 501	1.40%



Quinn Road (East Driveway)  
north of Massachusett Ave  
City, State: Arlington, MA  
Client: Nitsch Eng/B.Zimolka  
Site Code: TBD



PDI File #

207450 C

Count Date: Tuesday, February 4, 2020  
Direction: SB

AM	Cars	Single Unit Heavy	Multi Unit Heavy	Total
12:00 AM	0	0	0	0
12:15 AM	0	0	0	0
12:30 AM	0	0	0	0
12:45 AM	0	0	0	0
1:00 AM	0	0	0	0
1:15 AM	0	0	1	1
1:30 AM	0	0	0	0
1:45 AM	0	0	0	0
2:00 AM	0	0	0	0
2:15 AM	0	0	0	0
2:30 AM	0	0	0	0
2:45 AM	0	0	0	0
3:00 AM	0	0	0	0
3:15 AM	0	0	0	0
3:30 AM	0	0	0	0
3:45 AM	0	0	0	0
4:00 AM	0	0	0	0
4:15 AM	0	0	0	0
4:30 AM	0	0	0	0
4:45 AM	0	0	0	0
5:00 AM	0	0	0	0
5:15 AM	0	0	0	0
5:30 AM	0	0	0	0
5:45 AM	0	0	0	0
6:00 AM	0	0	0	0
6:15 AM	0	0	0	0
6:30 AM	0	0	0	0
6:45 AM	1	0	0	1
7:00 AM	0	0	0	0
7:15 AM	0	0	0	0
7:30 AM	0	1	0	1
7:45 AM	3	0	0	3
8:00 AM	2	0	0	2
8:15 AM	4	0	0	4
8:30 AM	4	0	0	4
8:45 AM	5	0	0	5
9:00 AM	2	0	0	2
9:15 AM	3	2	0	5
9:30 AM	1	0	0	1
9:45 AM	4	1	0	5
10:00 AM	8	1	0	9
10:15 AM	8	0	0	8
10:30 AM	6	0	0	6
10:45 AM	6	1	0	7
11:00 AM	5	0	1	6
11:15 AM	4	1	0	5
11:30 AM	3	0	0	3
11:45 AM	12	0	0	12

AM Total	81	7	2	90
Percentage	90.00%	7.78%	2.22%	
AM Peak	10:00 AM	9:15 AM	12:30 AM	10:00 AM
Volume	28	4	1	30

PM	Cars	Single Unit Heavy	Multi Unit Heavy	Total
12:00 PM	7	0	0	7
12:15 PM	6	1	0	7
12:30 PM	3	0	0	3
12:45 PM	8	0	0	8
1:00 PM	3	1	0	4
1:15 PM	8	1	0	9
1:30 PM	5	0	1	6
1:45 PM	6	0	0	6
2:00 PM	6	0	0	6
2:15 PM	3	1	0	4
2:30 PM	6	1	0	7
2:45 PM	5	1	1	7
3:00 PM	3	0	0	3
3:15 PM	3	0	0	3
3:30 PM	4	0	0	4
3:45 PM	4	0	0	4
4:00 PM	8	0	0	8
4:15 PM	4	0	0	4
4:30 PM	10	0	0	10
4:45 PM	4	0	0	4
5:00 PM	15	1	0	16
5:15 PM	5	0	0	5
5:30 PM	7	0	0	7
5:45 PM	4	0	0	4
6:00 PM	7	0	0	7
6:15 PM	4	0	0	4
6:30 PM	0	0	0	0
6:45 PM	0	0	0	0
7:00 PM	0	0	0	0
7:15 PM	1	0	0	1
7:30 PM	0	0	0	0
7:45 PM	5	0	0	5
8:00 PM	4	0	0	4
8:15 PM	1	0	0	1
8:30 PM	1	0	0	1
8:45 PM	1	0	0	1
9:00 PM	0	0	0	0
9:15 PM	0	0	0	0
9:30 PM	1	0	0	1
9:45 PM	0	0	0	0
10:00 PM	1	0	0	1
10:15 PM	0	0	0	0
10:30 PM	0	0	0	0
10:45 PM	0	0	0	0
11:00 PM	0	0	0	0
11:15 PM	1	0	0	1
11:30 PM	0	0	0	0
11:45 PM	0	0	0	0

PM Total	164	7	2	173
Percentage	94.80%	4.05%	1.16%	
PM Peak	4:30 PM	2:00 PM	12:45 PM	4:30 PM
Volume	34	3	1	35

Day Total	245	14	4	263
Percentage	93.16%	5.32%	23 of 501	1.52%



Quinn Road (East Driveway)  
north of Massachusett Ave  
City, State: Arlington, MA  
Client: Nitsch Eng/B.Zimolka  
Site Code: TBD



PDI File #

207450 C

Count Date: Wednesday, February 5, 2020  
Direction: SB

AM	Cars	Single Unit Heavy	Multi Unit Heavy	Total
12:00 AM	0	0	0	0
12:15 AM	0	0	0	0
12:30 AM	0	0	1	1
12:45 AM	0	0	0	0
1:00 AM	0	0	0	0
1:15 AM	0	0	0	0
1:30 AM	0	0	0	0
1:45 AM	0	0	0	0
2:00 AM	0	0	0	0
2:15 AM	0	0	0	0
2:30 AM	0	0	0	0
2:45 AM	0	0	0	0
3:00 AM	0	0	0	0
3:15 AM	0	0	0	0
3:30 AM	0	0	0	0
3:45 AM	0	0	0	0
4:00 AM	0	0	0	0
4:15 AM	0	0	0	0
4:30 AM	0	0	0	0
4:45 AM	0	0	0	0
5:00 AM	0	0	0	0
5:15 AM	0	0	0	0
5:30 AM	0	0	0	0
5:45 AM	0	0	0	0
6:00 AM	0	0	0	0
6:15 AM	0	0	0	0
6:30 AM	1	0	0	1
6:45 AM	1	0	0	1
7:00 AM	0	0	0	0
7:15 AM	1	0	0	1
7:30 AM	0	0	0	0
7:45 AM	2	0	0	2
8:00 AM	5	0	0	5
8:15 AM	3	0	1	4
8:30 AM	5	3	1	9
8:45 AM	0	1	0	1
9:00 AM	4	0	0	4
9:15 AM	7	0	0	7
9:30 AM	9	0	0	9
9:45 AM	5	0	0	5
10:00 AM	7	0	0	7
10:15 AM	6	0	0	6
10:30 AM	4	0	0	4
10:45 AM	0	1	0	1
11:00 AM	4	0	0	4
11:15 AM	7	0	0	7
11:30 AM	6	0	0	6
11:45 AM	10	0	0	10

AM Total	87	5	3	95
Percentage	91.58%	5.26%	3.16%	
AM Peak	9:15 AM	8:00 AM	7:45 AM	9:15 AM
Volume	28	4	2	28

PM	Cars	Single Unit Heavy	Multi Unit Heavy	Total
12:00 PM	5	0	1	6
12:15 PM	9	0	0	9
12:30 PM	6	0	0	6
12:45 PM	10	0	0	10
1:00 PM	4	1	0	5
1:15 PM	6	1	0	7
1:30 PM	12	0	0	12
1:45 PM	7	0	0	7
2:00 PM	8	0	0	8
2:15 PM	3	1	0	4
2:30 PM	7	0	0	7
2:45 PM	4	0	0	4
3:00 PM	8	1	1	10
3:15 PM	4	0	0	4
3:30 PM	5	0	0	5
3:45 PM	6	0	0	6
4:00 PM	4	1	0	5
4:15 PM	8	0	0	8
4:30 PM	3	0	1	4
4:45 PM	6	0	0	6
5:00 PM	10	0	0	10
5:15 PM	5	0	0	5
5:30 PM	8	0	0	8
5:45 PM	7	0	0	7
6:00 PM	6	0	0	6
6:15 PM	4	0	0	4
6:30 PM	1	0	0	1
6:45 PM	1	0	0	1
7:00 PM	1	0	0	1
7:15 PM	1	0	0	1
7:30 PM	3	0	0	3
7:45 PM	1	0	0	1
8:00 PM	3	0	0	3
8:15 PM	5	0	0	5
8:30 PM	0	0	0	0
8:45 PM	1	0	0	1
9:00 PM	0	0	0	0
9:15 PM	0	0	0	0
9:30 PM	0	0	0	0
9:45 PM	2	0	0	2
10:00 PM	0	0	0	0
10:15 PM	0	0	0	0
10:30 PM	0	0	0	0
10:45 PM	0	0	0	0
11:00 PM	0	0	0	0
11:15 PM	0	0	0	0
11:30 PM	0	0	0	0
11:45 PM	0	0	0	0

PM Total	184	5	3	192
Percentage	95.83%	2.60%	1.56%	
PM Peak	1:15 PM	12:30 PM	12:00 PM	12:45 PM
Volume	33	2	1	34

Day Total	271	10	6	287
Percentage	94.43%	3.48%	2.09%	



Quinn Road (East Driveway)  
north of Massachusetts Ave  
City, State: Arlington, MA  
Client: Nitsch Eng/B.Zimolka  
Site Code: TBD



PDI File # 207450 C

Direction: NB

## Weekly Report

Day Date	Tuesday 02/04/20		Wednesday 02/05/20												Week Ave	
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
12:00	0	10	0	4	0	0	0	0	0	0	0	0	0	0	0	7
12:15	0	5	0	5	0	0	0	0	0	0	0	0	0	0	0	5
12:30	0	7	0	7	0	0	0	0	0	0	0	0	0	0	0	7
12:45	0	23	0	10	0	0	0	0	0	0	0	0	0	0	0	17
1:00	0	2	0	7	0	0	0	0	0	0	0	0	0	0	0	5
1:15	0	1	0	4	0	0	0	0	0	0	0	0	0	0	0	3
1:30	0	0	0	8	0	0	0	0	0	0	0	0	0	0	0	4
1:45	0	0	0	11	0	0	0	0	0	0	0	0	0	0	0	6
2:00	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	2
2:15	0	1	0	7	0	0	0	0	0	0	0	0	0	0	0	4
2:30	0	1	0	6	0	0	0	0	0	0	0	0	0	0	0	4
2:45	0	4	0	2	0	0	0	0	0	0	0	0	0	0	0	3
3:00	0	3	0	5	0	0	0	0	0	0	0	0	0	0	0	4
3:15	0	4	0	7	0	0	0	0	0	0	0	0	0	0	0	6
3:30	0	4	0	4	0	0	0	0	0	0	0	0	0	0	0	4
3:45	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	2
4:00	0	3	1	4	0	0	0	0	0	0	0	0	0	0	1	4
4:15	0	3	0	4	0	0	0	0	0	0	0	0	0	0	0	4
4:30	0	3	0	1	0	0	0	0	0	0	0	0	0	0	0	2
4:45	0	3	0	1	0	0	0	0	0	0	0	0	0	0	0	2
5:00	0	3	0	2	0	0	0	0	0	0	0	0	0	0	0	3
5:15	1	2	0	4	0	0	0	0	0	0	0	0	0	0	1	3
5:30	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0	3
5:45	1	1	1	1	0	0	0	0	0	0	0	0	0	0	1	1
6:00	1	1	1	0	0	0	0	0	0	0	0	0	0	0	1	1
6:15	6	0	7	0	0	0	0	0	0	0	0	0	0	0	7	0
6:30	0	0	9	1	0	0	0	0	0	0	0	0	0	0	5	1
6:45	6	1	8	2	0	0	0	0	0	0	0	0	0	0	7	2
7:00	5	0	8	0	0	0	0	0	0	0	0	0	0	0	7	0
7:15	9	1	6	2	0	0	0	0	0	0	0	0	0	0	8	2
7:30	4	1	4	1	0	0	0	0	0	0	0	0	0	0	4	1
7:45	11	1	3	3	0	0	0	0	0	0	0	0	0	0	7	2
8:00	13	2	11	1	0	0	0	0	0	0	0	0	0	0	12	2
8:15	7	0	8	0	0	0	0	0	0	0	0	0	0	0	8	0
8:30	4	0	4	0	0	0	0	0	0	0	0	0	0	0	4	0
8:45	7	0	13	1	0	0	0	0	0	0	0	0	0	0	10	1
9:00	10	0	8	0	0	0	0	0	0	0	0	0	0	0	9	0
9:15	10	1	9	0	0	0	0	0	0	0	0	0	0	0	10	1
9:30	1	0	12	0	0	0	0	0	0	0	0	0	0	0	7	0
9:45	10	0	6	1	0	0	0	0	0	0	0	0	0	0	8	1
10:00	10	1	5	0	0	0	0	0	0	0	0	0	0	0	8	1
10:15	4	0	6	0	0	0	0	0	0	0	0	0	0	0	5	0
10:30	10	0	2	0	0	0	0	0	0	0	0	0	0	0	6	0
10:45	6	1	0	0	0	0	0	0	0	0	0	0	0	0	3	1
11:00	2	0	7	0	0	0	0	0	0	0	0	0	0	0	5	0
11:15	8	0	8	0	0	0	0	0	0	0	0	0	0	0	8	0
11:30	7	0	6	0	0	0	0	0	0	0	0	0	0	0	7	0
11:45	4	0	8	0	0	0	0	0	0	0	0	0	0	0	6	0
Total	157	98	161	125	0	0	0	0	0	0	0	0	0	0	159	112
Day Total	255		286		0		0		0		0		0		271	
Peak HR	7:15 AM	12:00 PM	8:45 AM	1:00 PM												
Volume	37	45	42	30											35	36



Quinn Road (East Driveway)  
north of Massachusetts Ave  
City, State: Arlington, MA  
Client: Nitsch Eng/B.Zimolka  
Site Code: TBD



PDI File # 207450 C

Direction: SB

### Weekly Report

Day Date	Tuesday 02/04/20		Wednesday 02/05/20												Week Ave			
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM		
12:00	0	7	0	6	0	0	0	0	0	0	0	0	0	0	0	7		
12:15	0	7	0	9	0	0	0	0	0	0	0	0	0	0	0	8		
12:30	0	3	1	6	0	0	0	0	0	0	0	0	0	0	1	5		
12:45	0	8	0	10	0	0	0	0	0	0	0	0	0	0	0	9		
1:00	0	4	0	5	0	0	0	0	0	0	0	0	0	0	0	5		
1:15	1	9	0	7	0	0	0	0	0	0	0	0	0	0	1	8		
1:30	0	6	0	12	0	0	0	0	0	0	0	0	0	0	0	9		
1:45	0	6	0	7	0	0	0	0	0	0	0	0	0	0	0	7		
2:00	0	6	0	8	0	0	0	0	0	0	0	0	0	0	0	7		
2:15	0	4	0	4	0	0	0	0	0	0	0	0	0	0	0	4		
2:30	0	7	0	7	0	0	0	0	0	0	0	0	0	0	0	7		
2:45	0	7	0	4	0	0	0	0	0	0	0	0	0	0	0	6		
3:00	0	3	0	10	0	0	0	0	0	0	0	0	0	0	0	7		
3:15	0	3	0	4	0	0	0	0	0	0	0	0	0	0	0	4		
3:30	0	4	0	5	0	0	0	0	0	0	0	0	0	0	0	5		
3:45	0	4	0	6	0	0	0	0	0	0	0	0	0	0	0	5		
4:00	0	8	0	5	0	0	0	0	0	0	0	0	0	0	0	7		
4:15	0	4	0	8	0	0	0	0	0	0	0	0	0	0	0	6		
4:30	0	10	0	4	0	0	0	0	0	0	0	0	0	0	0	7		
4:45	0	4	0	6	0	0	0	0	0	0	0	0	0	0	0	5		
5:00	0	16	0	10	0	0	0	0	0	0	0	0	0	0	0	13		
5:15	0	5	0	5	0	0	0	0	0	0	0	0	0	0	0	5		
5:30	0	7	0	8	0	0	0	0	0	0	0	0	0	0	0	8		
5:45	0	4	0	7	0	0	0	0	0	0	0	0	0	0	0	6		
6:00	0	7	0	6	0	0	0	0	0	0	0	0	0	0	0	7		
6:15	0	4	0	4	0	0	0	0	0	0	0	0	0	0	0	4		
6:30	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1	1		
6:45	1	0	1	1	0	0	0	0	0	0	0	0	0	0	1	1		
7:00	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1		
7:15	0	1	1	1	0	0	0	0	0	0	0	0	0	0	1	1		
7:30	1	0	0	3	0	0	0	0	0	0	0	0	0	0	1	2		
7:45	3	5	2	1	0	0	0	0	0	0	0	0	0	0	3	3		
8:00	2	4	5	3	0	0	0	0	0	0	0	0	0	0	4	4		
8:15	4	1	4	5	0	0	0	0	0	0	0	0	0	0	4	3		
8:30	4	1	9	0	0	0	0	0	0	0	0	0	0	0	7	1		
8:45	5	1	1	1	0	0	0	0	0	0	0	0	0	0	3	1		
9:00	2	0	4	0	0	0	0	0	0	0	0	0	0	0	3	0		
9:15	5	0	7	0	0	0	0	0	0	0	0	0	0	0	6	0		
9:30	1	1	9	0	0	0	0	0	0	0	0	0	0	0	5	1		
9:45	5	0	5	2	0	0	0	0	0	0	0	0	0	0	5	1		
10:00	9	1	7	0	0	0	0	0	0	0	0	0	0	0	8	1		
10:15	8	0	6	0	0	0	0	0	0	0	0	0	0	0	7	0		
10:30	6	0	4	0	0	0	0	0	0	0	0	0	0	0	5	0		
10:45	7	0	1	0	0	0	0	0	0	0	0	0	0	0	4	0		
11:00	6	0	4	0	0	0	0	0	0	0	0	0	0	0	5	0		
11:15	5	1	7	0	0	0	0	0	0	0	0	0	0	0	6	1		
11:30	3	0	6	0	0	0	0	0	0	0	0	0	0	0	5	0		
11:45	12	0	10	0	0	0	0	0	0	0	0	0	0	0	11	0		
Total	90	173	95	192	0	0	0	0	0	0	0	0	0	0	93	183		
Day Total	263		287		0		0		0		0		0		275			
Peak HR	10:00 AM	4:30 PM	9:15 AM	12:45 PM													11:00 AM	4:15 PM
Volume	30	35	28	34													27	31



Forest Street  
norht of Massachusetts Ave  
City, State: Arlington, MA  
Client: Nitsch Eng/B.Zimolka  
Site Code: TBD



PDI File #

207450 D

Count Date: Tuesday, February 4, 2020  
Direction: NB

AM	Cars	Single Unit Heavy	Multi Unit Heavy	Total
12:00 AM	2	0	0	2
12:15 AM	1	0	0	1
12:30 AM	1	0	0	1
12:45 AM	0	0	0	0
1:00 AM	1	0	0	1
1:15 AM	0	0	0	0
1:30 AM	0	0	0	0
1:45 AM	0	0	0	0
2:00 AM	1	0	0	1
2:15 AM	0	0	0	0
2:30 AM	0	0	0	0
2:45 AM	0	0	0	0
3:00 AM	0	1	0	1
3:15 AM	0	0	0	0
3:30 AM	0	0	0	0
3:45 AM	0	0	0	0
4:00 AM	0	0	0	0
4:15 AM	0	0	0	0
4:30 AM	1	0	0	1
4:45 AM	0	0	0	0
5:00 AM	1	0	0	1
5:15 AM	1	0	0	1
5:30 AM	6	0	0	6
5:45 AM	7	0	0	7
6:00 AM	5	0	0	5
6:15 AM	6	0	0	6
6:30 AM	13	0	0	13
6:45 AM	19	0	0	19
7:00 AM	20	0	0	20
7:15 AM	15	1	0	16
7:30 AM	48	3	1	52
7:45 AM	58	0	0	58
8:00 AM	54	0	0	54
8:15 AM	26	0	0	26
8:30 AM	26	2	0	28
8:45 AM	26	0	1	27
9:00 AM	15	1	0	16
9:15 AM	11	0	1	12
9:30 AM	22	1	0	23
9:45 AM	21	1	0	22
10:00 AM	21	0	0	21
10:15 AM	18	2	0	20
10:30 AM	23	0	0	23
10:45 AM	32	0	0	32
11:00 AM	23	1	0	24
11:15 AM	20	2	1	23
11:30 AM	20	2	0	22
11:45 AM	18	1	0	19

AM Total	582	18	4	604
Percentage	96.36%	2.98%	0.66%	
AM Peak	7:30 AM	11:00 AM	8:30 AM	7:30 AM
Volume	186	6	2	190

PM	Cars	Single Unit Heavy	Multi Unit Heavy	Total
12:00 PM	26	0	0	26
12:15 PM	20	1	0	21
12:30 PM	40	1	0	41
12:45 PM	43	0	0	43
1:00 PM	37	1	0	38
1:15 PM	59	1	0	60
1:30 PM	40	2	0	42
1:45 PM	73	1	0	74
2:00 PM	48	1	0	49
2:15 PM	66	1	0	67
2:30 PM	69	2	1	72
2:45 PM	44	1	0	45
3:00 PM	54	3	0	57
3:15 PM	43	2	0	45
3:30 PM	36	1	0	37
3:45 PM	47	2	0	49
4:00 PM	48	0	0	48
4:15 PM	61	1	0	62
4:30 PM	52	0	0	52
4:45 PM	42	1	0	43
5:00 PM	76	2	0	78
5:15 PM	80	0	0	80
5:30 PM	66	1	0	67
5:45 PM	64	0	0	64
6:00 PM	63	0	0	63
6:15 PM	50	0	0	50
6:30 PM	35	0	0	35
6:45 PM	36	0	0	36
7:00 PM	25	0	0	25
7:15 PM	19	0	0	19
7:30 PM	24	0	0	24
7:45 PM	30	0	0	30
8:00 PM	17	0	0	17
8:15 PM	20	0	0	20
8:30 PM	16	0	0	16
8:45 PM	15	0	0	15
9:00 PM	21	0	0	21
9:15 PM	16	0	0	16
9:30 PM	15	0	0	15
9:45 PM	9	0	0	9
10:00 PM	13	0	0	13
10:15 PM	6	0	0	6
10:30 PM	3	0	0	3
10:45 PM	4	0	0	4
11:00 PM	4	0	0	4
11:15 PM	0	0	0	0
11:30 PM	1	0	0	1
11:45 PM	3	0	0	3

PM Total	1679	25	1	1705
Percentage	98.48%	1.47%	0.06%	
PM Peak	5:00 PM	2:30 PM	1:45 PM	5:00 PM
Volume	286	8	1	289

Day Total	2261	43	5	2309
Percentage	97.92%	1.86%	0.22%	



Forest Street  
norht of Massachusetts Ave  
City, State: Arlington, MA  
Client: Nitsch Eng/B.Zimolka  
Site Code: TBD



PDI File # 207450 D

Count Date: Wednesday, February 5, 2020  
Direction: NB

AM	Cars	Single Unit Heavy	Multi Unit Heavy	Total
12:00 AM	2	0	0	2
12:15 AM	1	0	0	1
12:30 AM	1	0	0	1
12:45 AM	0	0	0	0
1:00 AM	0	0	0	0
1:15 AM	0	0	0	0
1:30 AM	0	0	0	0
1:45 AM	0	0	0	0
2:00 AM	0	0	0	0
2:15 AM	0	0	0	0
2:30 AM	0	0	0	0
2:45 AM	0	0	0	0
3:00 AM	1	0	0	1
3:15 AM	0	0	0	0
3:30 AM	2	1	0	3
3:45 AM	0	0	0	0
4:00 AM	1	0	0	1
4:15 AM	0	0	0	0
4:30 AM	1	0	0	1
4:45 AM	1	0	0	1
5:00 AM	3	0	0	3
5:15 AM	4	0	0	4
5:30 AM	5	0	0	5
5:45 AM	2	0	0	2
6:00 AM	7	0	0	7
6:15 AM	6	1	0	7
6:30 AM	17	1	0	18
6:45 AM	18	5	0	23
7:00 AM	20	0	0	20
7:15 AM	19	0	0	19
7:30 AM	38	0	0	38
7:45 AM	57	0	0	57
8:00 AM	50	1	0	51
8:15 AM	41	1	0	42
8:30 AM	32	0	0	32
8:45 AM	27	1	0	28
9:00 AM	26	0	0	26
9:15 AM	12	0	0	12
9:30 AM	16	0	0	16
9:45 AM	17	0	0	17
10:00 AM	18	1	0	19
10:15 AM	15	0	0	15
10:30 AM	17	1	0	18
10:45 AM	18	2	0	20
11:00 AM	24	1	0	25
11:15 AM	16	1	0	17
11:30 AM	20	1	0	21
11:45 AM	20	0	0	20

AM Total	575	18	0	593
Percentage	96.96%	3.04%	0.00%	
AM Peak	7:30 AM	6:00 AM	12:00 AM	7:30 AM
Volume	186	7	0	188

PM	Cars	Single Unit Heavy	Multi Unit Heavy	Total
12:00 PM	26	2	0	28
12:15 PM	24	1	0	25
12:30 PM	24	2	0	26
12:45 PM	32	1	0	33
1:00 PM	29	1	0	30
1:15 PM	17	1	0	18
1:30 PM	21	2	0	23
1:45 PM	12	0	0	12
2:00 PM	25	1	0	26
2:15 PM	41	3	0	44
2:30 PM	48	1	1	50
2:45 PM	50	2	0	52
3:00 PM	61	1	0	62
3:15 PM	53	2	0	55
3:30 PM	69	0	0	69
3:45 PM	61	4	0	65
4:00 PM	58	0	0	58
4:15 PM	76	1	0	77
4:30 PM	64	0	0	64
4:45 PM	59	1	0	60
5:00 PM	67	0	0	67
5:15 PM	86	0	0	86
5:30 PM	87	1	0	88
5:45 PM	74	1	0	75
6:00 PM	50	0	0	50
6:15 PM	40	0	0	40
6:30 PM	32	0	0	32
6:45 PM	35	0	0	35
7:00 PM	24	0	0	24
7:15 PM	21	0	0	21
7:30 PM	26	0	0	26
7:45 PM	18	0	0	18
8:00 PM	22	0	0	22
8:15 PM	20	0	0	20
8:30 PM	24	0	0	24
8:45 PM	16	0	0	16
9:00 PM	16	0	0	16
9:15 PM	15	0	0	15
9:30 PM	7	0	0	7
9:45 PM	10	0	0	10
10:00 PM	2	0	0	2
10:15 PM	4	0	0	4
10:30 PM	4	0	0	4
10:45 PM	5	0	0	5
11:00 PM	1	0	0	1
11:15 PM	1	0	0	1
11:30 PM	4	0	0	4
11:45 PM	2	0	0	2

PM Total	1563	28	1	1592
Percentage	98.18%	1.76%	0.06%	
PM Peak	5:00 PM	2:00 PM	1:45 PM	5:00 PM
Volume	314	7	1	316

Day Total	2138	46	1	2185
Percentage	97.85%	2.11%	0.05%	28 of 501



Forest Street  
norht of Massachusetts Ave  
City, State: Arlington, MA  
Client: Nitsch Eng/B.Zimolka  
Site Code: TBD



PDI File #

207450 D

Count Date: Tuesday, February 4, 2020  
Direction: SB

AM	Cars	Single Unit Heavy	Multi Unit Heavy	Total
12:00 AM	0	0	0	0
12:15 AM	0	0	0	0
12:30 AM	2	0	0	2
12:45 AM	2	0	0	2
1:00 AM	0	0	0	0
1:15 AM	0	0	0	0
1:30 AM	0	0	0	0
1:45 AM	0	0	0	0
2:00 AM	1	0	0	1
2:15 AM	1	0	0	1
2:30 AM	0	0	0	0
2:45 AM	0	0	0	0
3:00 AM	0	0	0	0
3:15 AM	1	0	0	1
3:30 AM	0	0	0	0
3:45 AM	0	0	0	0
4:00 AM	1	0	0	1
4:15 AM	2	0	0	2
4:30 AM	3	0	0	3
4:45 AM	2	0	0	2
5:00 AM	0	0	0	0
5:15 AM	3	0	0	3
5:30 AM	5	0	0	5
5:45 AM	6	0	1	7
6:00 AM	10	0	0	10
6:15 AM	17	0	0	17
6:30 AM	20	2	0	22
6:45 AM	35	2	0	37
7:00 AM	66	4	0	70
7:15 AM	64	2	1	67
7:30 AM	76	1	0	77
7:45 AM	69	0	0	69
8:00 AM	77	2	0	79
8:15 AM	55	1	0	56
8:30 AM	41	2	0	43
8:45 AM	39	2	0	41
9:00 AM	27	0	0	27
9:15 AM	34	0	0	34
9:30 AM	20	1	0	21
9:45 AM	22	0	1	23
10:00 AM	22	0	0	22
10:15 AM	22	1	0	23
10:30 AM	21	2	0	23
10:45 AM	21	1	0	22
11:00 AM	19	2	0	21
11:15 AM	25	4	0	29
11:30 AM	16	0	0	16
11:45 AM	12	2	1	15

AM Total	859	31	4	894
Percentage	96.09%	3.47%	0.45%	
AM Peak	7:15 AM	6:30 AM	5:00 AM	7:15 AM
Volume	286	10	1	292

PM	Cars	Single Unit Heavy	Multi Unit Heavy	Total
12:00 PM	18	0	0	18
12:15 PM	30	0	0	30
12:30 PM	22	1	0	23
12:45 PM	22	1	0	23
1:00 PM	23	1	0	24
1:15 PM	22	1	0	23
1:30 PM	21	0	1	22
1:45 PM	22	0	0	22
2:00 PM	19	0	1	20
2:15 PM	24	2	0	26
2:30 PM	27	3	0	30
2:45 PM	25	0	0	25
3:00 PM	25	1	0	26
3:15 PM	18	4	0	22
3:30 PM	19	1	0	20
3:45 PM	17	0	0	17
4:00 PM	33	0	0	33
4:15 PM	25	0	0	25
4:30 PM	32	0	0	32
4:45 PM	33	0	0	33
5:00 PM	28	0	0	28
5:15 PM	24	0	0	24
5:30 PM	22	0	0	22
5:45 PM	32	0	0	32
6:00 PM	27	1	0	28
6:15 PM	29	0	0	29
6:30 PM	27	0	0	27
6:45 PM	20	0	0	20
7:00 PM	17	0	0	17
7:15 PM	17	0	0	17
7:30 PM	14	0	0	14
7:45 PM	10	0	0	10
8:00 PM	14	0	0	14
8:15 PM	21	0	0	21
8:30 PM	14	0	0	14
8:45 PM	9	0	0	9
9:00 PM	8	2	0	10
9:15 PM	9	0	0	9
9:30 PM	4	0	0	4
9:45 PM	4	0	0	4
10:00 PM	6	0	0	6
10:15 PM	5	0	0	5
10:30 PM	3	0	0	3
10:45 PM	6	0	0	6
11:00 PM	1	0	0	1
11:15 PM	0	0	0	0
11:30 PM	3	0	0	3
11:45 PM	3	0	0	3

PM Total	854	18	2	874
Percentage	97.71%	2.06%	0.23%	
PM Peak	4:00 PM	2:30 PM	1:15 PM	4:00 PM
Volume	123	8	2	123

Day Total	1713	49	6	1768
Percentage	96.89%	2.77%	0.34%	



Forest Street  
norht of Massachusetts Ave  
City, State: Arlington, MA  
Client: Nitsch Eng/B.Zimolka  
Site Code: TBD



PDI File # 207450 D

Count Date: Wednesday, February 5, 2020  
Direction: SB

AM	Cars	Single Unit Heavy	Multi Unit Heavy	Total
12:00 AM	0	0	0	0
12:15 AM	2	0	0	2
12:30 AM	2	0	0	2
12:45 AM	2	0	0	2
1:00 AM	2	0	0	2
1:15 AM	0	0	0	0
1:30 AM	0	0	0	0
1:45 AM	0	0	0	0
2:00 AM	1	0	0	1
2:15 AM	0	0	0	0
2:30 AM	0	0	0	0
2:45 AM	0	0	0	0
3:00 AM	0	0	0	0
3:15 AM	0	0	0	0
3:30 AM	0	0	0	0
3:45 AM	1	0	0	1
4:00 AM	1	0	0	1
4:15 AM	2	0	0	2
4:30 AM	4	0	0	4
4:45 AM	1	0	0	1
5:00 AM	1	0	0	1
5:15 AM	2	0	0	2
5:30 AM	6	0	0	6
5:45 AM	9	0	0	9
6:00 AM	10	0	0	10
6:15 AM	21	0	0	21
6:30 AM	21	4	0	25
6:45 AM	40	4	0	44
7:00 AM	58	3	0	61
7:15 AM	63	0	0	63
7:30 AM	86	0	0	86
7:45 AM	70	1	0	71
8:00 AM	77	4	0	81
8:15 AM	63	0	0	63
8:30 AM	51	0	0	51
8:45 AM	35	0	0	35
9:00 AM	24	1	0	25
9:15 AM	18	0	0	18
9:30 AM	23	0	0	23
9:45 AM	24	0	0	24
10:00 AM	18	0	0	18
10:15 AM	16	2	0	18
10:30 AM	19	0	0	19
10:45 AM	17	1	0	18
11:00 AM	13	0	0	13
11:15 AM	29	2	0	31
11:30 AM	23	1	0	24
11:45 AM	22	4	0	26

AM Total	877	27	0	904
Percentage	97.01%	2.99%	0.00%	
AM Peak	7:15 AM	6:15 AM	12:00 AM	7:15 AM
Volume	296	11	0	301

PM	Cars	Single Unit Heavy	Multi Unit Heavy	Total
12:00 PM	27	1	0	28
12:15 PM	31	1	0	32
12:30 PM	24	1	0	25
12:45 PM	21	1	1	23
1:00 PM	19	0	0	19
1:15 PM	17	0	0	17
1:30 PM	18	1	0	19
1:45 PM	23	2	0	25
2:00 PM	18	3	0	21
2:15 PM	25	0	0	25
2:30 PM	22	0	0	22
2:45 PM	35	1	0	36
3:00 PM	24	0	0	24
3:15 PM	22	2	0	24
3:30 PM	25	1	0	26
3:45 PM	25	1	0	26
4:00 PM	29	1	0	30
4:15 PM	25	0	0	25
4:30 PM	32	0	0	32
4:45 PM	28	0	0	28
5:00 PM	37	0	0	37
5:15 PM	16	0	0	16
5:30 PM	38	1	0	39
5:45 PM	47	0	0	47
6:00 PM	53	1	0	54
6:15 PM	24	0	0	24
6:30 PM	26	0	0	26
6:45 PM	21	0	0	21
7:00 PM	11	0	0	11
7:15 PM	17	0	0	17
7:30 PM	11	0	0	11
7:45 PM	15	0	0	15
8:00 PM	22	1	0	23
8:15 PM	7	0	0	7
8:30 PM	9	0	0	9
8:45 PM	10	0	0	10
9:00 PM	12	0	0	12
9:15 PM	4	0	0	4
9:30 PM	4	0	0	4
9:45 PM	7	0	0	7
10:00 PM	1	0	0	1
10:15 PM	3	0	0	3
10:30 PM	1	0	0	1
10:45 PM	4	0	0	4
11:00 PM	1	0	0	1
11:15 PM	0	0	0	0
11:30 PM	2	0	0	2
11:45 PM	4	0	0	4

PM Total	897	19	1	917
Percentage	97.82%	2.07%	0.11%	
PM Peak	5:30 PM	1:15 PM	12:00 PM	5:30 PM
Volume	162	6	1	164

Day Total	1774	46	1	1821
Percentage	97.42%	2.53%	0.05%	



Forest Street  
norht of Massachusetts Ave  
City, State: Arlington, MA  
Client: Nitsch Eng/B.Zimolka  
Site Code: TBD



PDI File # 207450 D

Direction: NB

## Weekly Report

Day Date	Tuesday 02/04/20		Wednesday 02/05/20												Week Ave	
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
12:00	2	26	2	28	0	0	0	0	0	0	0	0	0	0	2	27
12:15	1	21	1	25	0	0	0	0	0	0	0	0	0	0	1	23
12:30	1	41	1	26	0	0	0	0	0	0	0	0	0	0	1	34
12:45	0	43	0	33	0	0	0	0	0	0	0	0	0	0	0	38
1:00	1	38	0	30	0	0	0	0	0	0	0	0	0	0	1	34
1:15	0	60	0	18	0	0	0	0	0	0	0	0	0	0	0	39
1:30	0	42	0	23	0	0	0	0	0	0	0	0	0	0	0	33
1:45	0	74	0	12	0	0	0	0	0	0	0	0	0	0	0	43
2:00	1	49	0	26	0	0	0	0	0	0	0	0	0	0	1	38
2:15	0	67	0	44	0	0	0	0	0	0	0	0	0	0	0	56
2:30	0	72	0	50	0	0	0	0	0	0	0	0	0	0	0	61
2:45	0	45	0	52	0	0	0	0	0	0	0	0	0	0	0	49
3:00	1	57	1	62	0	0	0	0	0	0	0	0	0	0	1	60
3:15	0	45	0	55	0	0	0	0	0	0	0	0	0	0	0	50
3:30	0	37	3	69	0	0	0	0	0	0	0	0	0	0	2	53
3:45	0	49	0	65	0	0	0	0	0	0	0	0	0	0	0	57
4:00	0	48	1	58	0	0	0	0	0	0	0	0	0	0	1	53
4:15	0	62	0	77	0	0	0	0	0	0	0	0	0	0	0	70
4:30	1	52	1	64	0	0	0	0	0	0	0	0	0	0	1	58
4:45	0	43	1	60	0	0	0	0	0	0	0	0	0	0	1	52
5:00	1	78	3	67	0	0	0	0	0	0	0	0	0	0	2	73
5:15	1	80	4	86	0	0	0	0	0	0	0	0	0	0	3	83
5:30	6	67	5	88	0	0	0	0	0	0	0	0	0	0	6	78
5:45	7	64	2	75	0	0	0	0	0	0	0	0	0	0	5	70
6:00	5	63	7	50	0	0	0	0	0	0	0	0	0	0	6	57
6:15	6	50	7	40	0	0	0	0	0	0	0	0	0	0	7	45
6:30	13	35	18	32	0	0	0	0	0	0	0	0	0	0	16	34
6:45	19	36	23	35	0	0	0	0	0	0	0	0	0	0	21	36
7:00	20	25	20	24	0	0	0	0	0	0	0	0	0	0	20	25
7:15	16	19	19	21	0	0	0	0	0	0	0	0	0	0	18	20
7:30	52	24	38	26	0	0	0	0	0	0	0	0	0	0	45	25
7:45	58	30	57	18	0	0	0	0	0	0	0	0	0	0	58	24
8:00	54	17	51	22	0	0	0	0	0	0	0	0	0	0	53	20
8:15	26	20	42	20	0	0	0	0	0	0	0	0	0	0	34	20
8:30	28	16	32	24	0	0	0	0	0	0	0	0	0	0	30	20
8:45	27	15	28	16	0	0	0	0	0	0	0	0	0	0	28	16
9:00	16	21	26	16	0	0	0	0	0	0	0	0	0	0	21	19
9:15	12	16	12	15	0	0	0	0	0	0	0	0	0	0	12	16
9:30	23	15	16	7	0	0	0	0	0	0	0	0	0	0	20	11
9:45	22	9	17	10	0	0	0	0	0	0	0	0	0	0	20	10
10:00	21	13	19	2	0	0	0	0	0	0	0	0	0	0	20	8
10:15	20	6	15	4	0	0	0	0	0	0	0	0	0	0	18	5
10:30	23	3	18	4	0	0	0	0	0	0	0	0	0	0	21	4
10:45	32	4	20	5	0	0	0	0	0	0	0	0	0	0	26	5
11:00	24	4	25	1	0	0	0	0	0	0	0	0	0	0	25	3
11:15	23	0	17	1	0	0	0	0	0	0	0	0	0	0	20	1
11:30	22	1	21	4	0	0	0	0	0	0	0	0	0	0	22	3
11:45	19	3	20	2	0	0	0	0	0	0	0	0	0	0	20	3
Total	604	1705	593	1592	0	0	0	0	0	0	0	0	0	0	599	1649
Day Total	2309		2185		0		0		0		0		0		2247	
Peak HR	7:30 AM	5:00 PM	7:30 AM	5:00 PM												
Volume	190	289	188	316											189	303



Forest Street  
norht of Massachusetts Ave  
City, State: Arlington, MA  
Client: Nitsch Eng/B.Zimolka  
Site Code: TBD



PDI File # 207450 D

Direction: SB

## Weekly Report

Day Date	Tuesday 02/04/20		Wednesday 02/05/20												Week Ave	
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
12:00	0	18	0	28	0	0	0	0	0	0	0	0	0	0	0	23
12:15	0	30	2	32	0	0	0	0	0	0	0	0	0	0	1	31
12:30	2	23	2	25	0	0	0	0	0	0	0	0	0	0	2	24
12:45	2	23	2	23	0	0	0	0	0	0	0	0	0	0	2	23
1:00	0	24	2	19	0	0	0	0	0	0	0	0	0	0	1	22
1:15	0	23	0	17	0	0	0	0	0	0	0	0	0	0	0	20
1:30	0	22	0	19	0	0	0	0	0	0	0	0	0	0	0	21
1:45	0	22	0	25	0	0	0	0	0	0	0	0	0	0	0	24
2:00	1	20	1	21	0	0	0	0	0	0	0	0	0	0	1	21
2:15	1	26	0	25	0	0	0	0	0	0	0	0	0	0	1	26
2:30	0	30	0	22	0	0	0	0	0	0	0	0	0	0	0	26
2:45	0	25	0	36	0	0	0	0	0	0	0	0	0	0	0	31
3:00	0	26	0	24	0	0	0	0	0	0	0	0	0	0	0	25
3:15	1	22	0	24	0	0	0	0	0	0	0	0	0	0	1	23
3:30	0	20	0	26	0	0	0	0	0	0	0	0	0	0	0	23
3:45	0	17	1	26	0	0	0	0	0	0	0	0	0	0	1	22
4:00	1	33	1	30	0	0	0	0	0	0	0	0	0	0	1	32
4:15	2	25	2	25	0	0	0	0	0	0	0	0	0	0	2	25
4:30	3	32	4	32	0	0	0	0	0	0	0	0	0	0	4	32
4:45	2	33	1	28	0	0	0	0	0	0	0	0	0	0	2	31
5:00	0	28	1	37	0	0	0	0	0	0	0	0	0	0	1	33
5:15	3	24	2	16	0	0	0	0	0	0	0	0	0	0	3	20
5:30	5	22	6	39	0	0	0	0	0	0	0	0	0	0	6	31
5:45	7	32	9	47	0	0	0	0	0	0	0	0	0	0	8	40
6:00	10	28	10	54	0	0	0	0	0	0	0	0	0	0	10	41
6:15	17	29	21	24	0	0	0	0	0	0	0	0	0	0	19	27
6:30	22	27	25	26	0	0	0	0	0	0	0	0	0	0	24	27
6:45	37	20	44	21	0	0	0	0	0	0	0	0	0	0	41	21
7:00	70	17	61	11	0	0	0	0	0	0	0	0	0	0	66	14
7:15	67	17	63	17	0	0	0	0	0	0	0	0	0	0	65	17
7:30	77	14	86	11	0	0	0	0	0	0	0	0	0	0	82	13
7:45	69	10	71	15	0	0	0	0	0	0	0	0	0	0	70	13
8:00	79	14	81	23	0	0	0	0	0	0	0	0	0	0	80	19
8:15	56	21	63	7	0	0	0	0	0	0	0	0	0	0	60	14
8:30	43	14	51	9	0	0	0	0	0	0	0	0	0	0	47	12
8:45	41	9	35	10	0	0	0	0	0	0	0	0	0	0	38	10
9:00	27	10	25	12	0	0	0	0	0	0	0	0	0	0	26	11
9:15	34	9	18	4	0	0	0	0	0	0	0	0	0	0	26	7
9:30	21	4	23	4	0	0	0	0	0	0	0	0	0	0	22	4
9:45	23	4	24	7	0	0	0	0	0	0	0	0	0	0	24	6
10:00	22	6	18	1	0	0	0	0	0	0	0	0	0	0	20	4
10:15	23	5	18	3	0	0	0	0	0	0	0	0	0	0	21	4
10:30	23	3	19	1	0	0	0	0	0	0	0	0	0	0	21	2
10:45	22	6	18	4	0	0	0	0	0	0	0	0	0	0	20	5
11:00	21	1	13	1	0	0	0	0	0	0	0	0	0	0	17	1
11:15	29	0	31	0	0	0	0	0	0	0	0	0	0	0	30	0
11:30	16	3	24	2	0	0	0	0	0	0	0	0	0	0	20	3
11:45	15	3	26	4	0	0	0	0	0	0	0	0	0	0	21	4
Total	894	874	904	917	0	0	0	0	0	0	0	0	0	0	899	896
Day Total	1768		1821		0		0		0		0		0		1795	
Peak HR	7:15 AM	4:00 PM	7:15 AM	5:30 PM											7:15 AM	5:30 PM
Volume	292	123	301	164											297	138



Burton Street  
south of Massachusetts Ave  
City, State: Arlington, MA  
Client: Nitsch Eng/B.Zimolka  
Site Code: TBD



Count Date: Tuesday, February 4, 2020  
Direction: EB

AM	Cars	Single Unit Heavy	Multi Unit Heavy	Total	PM	Cars	Single Unit Heavy	Multi Unit Heavy	Total
12:00 AM	0	0	0	0	12:00 PM	0	0	0	0
12:15 AM	0	0	0	0	12:15 PM	0	0	0	0
12:30 AM	0	0	0	0	12:30 PM	0	0	0	0
12:45 AM	0	0	0	0	12:45 PM	0	0	0	0
1:00 AM	0	0	0	0	1:00 PM	0	0	0	0
1:15 AM	0	0	0	0	1:15 PM	0	0	0	0
1:30 AM	0	0	0	0	1:30 PM	0	0	0	0
1:45 AM	0	0	0	0	1:45 PM	0	0	0	0
2:00 AM	0	0	0	0	2:00 PM	0	0	0	0
2:15 AM	0	0	0	0	2:15 PM	0	0	0	0
2:30 AM	0	0	0	0	2:30 PM	0	0	0	0
2:45 AM	0	0	0	0	2:45 PM	0	0	0	0
3:00 AM	0	0	0	0	3:00 PM	0	0	0	0
3:15 AM	0	0	0	0	3:15 PM	0	0	0	0
3:30 AM	0	0	0	0	3:30 PM	0	0	0	0
3:45 AM	0	0	0	0	3:45 PM	0	0	0	0
4:00 AM	0	0	0	0	4:00 PM	0	0	0	0
4:15 AM	0	0	0	0	4:15 PM	0	0	0	0
4:30 AM	0	0	0	0	4:30 PM	0	0	0	0
4:45 AM	0	0	0	0	4:45 PM	0	0	0	0
5:00 AM	0	0	0	0	5:00 PM	0	0	0	0
5:15 AM	0	0	0	0	5:15 PM	0	0	0	0
5:30 AM	0	0	0	0	5:30 PM	0	0	0	0
5:45 AM	0	0	0	0	5:45 PM	0	0	0	0
6:00 AM	0	0	0	0	6:00 PM	0	0	0	0
6:15 AM	0	0	0	0	6:15 PM	0	0	0	0
6:30 AM	0	0	0	0	6:30 PM	0	0	0	0
6:45 AM	0	0	0	0	6:45 PM	0	0	0	0
7:00 AM	0	0	0	0	7:00 PM	0	0	0	0
7:15 AM	0	0	0	0	7:15 PM	0	0	0	0
7:30 AM	0	0	0	0	7:30 PM	0	0	0	0
7:45 AM	0	0	0	0	7:45 PM	0	0	0	0
8:00 AM	0	0	0	0	8:00 PM	0	0	0	0
8:15 AM	0	0	0	0	8:15 PM	0	0	0	0
8:30 AM	0	0	0	0	8:30 PM	0	0	0	0
8:45 AM	0	0	0	0	8:45 PM	0	0	0	0
9:00 AM	0	0	0	0	9:00 PM	0	0	0	0
9:15 AM	0	0	0	0	9:15 PM	0	0	0	0
9:30 AM	0	0	0	0	9:30 PM	0	0	0	0
9:45 AM	0	0	0	0	9:45 PM	0	0	0	0
10:00 AM	0	0	0	0	10:00 PM	0	0	0	0
10:15 AM	0	0	0	0	10:15 PM	0	0	0	0
10:30 AM	0	0	0	0	10:30 PM	0	0	0	0
10:45 AM	0	0	0	0	10:45 PM	0	0	0	0
11:00 AM	0	0	0	0	11:00 PM	0	0	0	0
11:15 AM	0	0	0	0	11:15 PM	0	0	0	0
11:30 AM	0	0	0	0	11:30 PM	0	0	0	0
11:45 AM	0	0	0	0	11:45 PM	0	0	0	0
AM Total	0	0	0	0	PM Total	0	0	0	0
Percentage	#DIV/0!	#DIV/0!	#DIV/0!		Percentage	#DIV/0!	#DIV/0!	#DIV/0!	
AM Peak	12:00 AM	12:00 AM	12:00 AM	12:00 AM	PM Peak	12:00 PM	12:00 PM	12:00 PM	12:00 PM
Volume	0	0	0	0	Volume	0	0	0	0
Day Total					Day Total	0	0	0	0
Percentage	#DIV/0!	#DIV/0!	#DIV/0!		Percentage	#DIV/0!	#DIV/0!	33 #DIV/0!	



Burton Street  
south of Massachusetts Ave  
City, State: Arlington, MA  
Client: Nitsch Eng/B.Zimolka  
Site Code: TBD



PDI File #

207450 E

Count Date: Wednesday, February 5, 2020  
Direction: EB

AM	Cars	Single Unit Heavy	Multi Unit Heavy	Total
12:00 AM	0	0	0	0
12:15 AM	0	0	0	0
12:30 AM	0	0	0	0
12:45 AM	0	0	0	0
1:00 AM	0	0	0	0
1:15 AM	0	0	0	0
1:30 AM	0	0	0	0
1:45 AM	0	0	0	0
2:00 AM	0	0	0	0
2:15 AM	0	0	0	0
2:30 AM	0	0	0	0
2:45 AM	0	0	0	0
3:00 AM	0	0	0	0
3:15 AM	0	0	0	0
3:30 AM	0	0	0	0
3:45 AM	0	0	0	0
4:00 AM	0	0	0	0
4:15 AM	0	0	0	0
4:30 AM	0	0	0	0
4:45 AM	0	0	0	0
5:00 AM	0	0	0	0
5:15 AM	0	0	0	0
5:30 AM	0	0	0	0
5:45 AM	0	0	0	0
6:00 AM	0	0	0	0
6:15 AM	0	0	0	0
6:30 AM	0	0	0	0
6:45 AM	0	0	0	0
7:00 AM	0	0	0	0
7:15 AM	0	0	0	0
7:30 AM	0	0	0	0
7:45 AM	0	0	0	0
8:00 AM	0	0	0	0
8:15 AM	0	0	0	0
8:30 AM	0	0	0	0
8:45 AM	0	0	0	0
9:00 AM	0	0	0	0
9:15 AM	0	0	0	0
9:30 AM	0	0	0	0
9:45 AM	0	0	0	0
10:00 AM	0	0	0	0
10:15 AM	0	0	0	0
10:30 AM	0	0	0	0
10:45 AM	0	0	0	0
11:00 AM	0	0	0	0
11:15 AM	0	0	0	0
11:30 AM	0	0	0	0
11:45 AM	0	0	0	0

AM Total	0	0	0	0
Percentage	#DIV/0!	#DIV/0!	#DIV/0!	
AM Peak	12:00 AM	12:00 AM	12:00 AM	12:00 AM
Volume	0	0	0	0

PM	Cars	Single Unit Heavy	Multi Unit Heavy	Total
12:00 PM	0	0	0	0
12:15 PM	0	0	0	0
12:30 PM	0	0	0	0
12:45 PM	0	0	0	0
1:00 PM	0	0	0	0
1:15 PM	0	0	0	0
1:30 PM	0	0	0	0
1:45 PM	0	0	0	0
2:00 PM	0	0	0	0
2:15 PM	0	0	0	0
2:30 PM	0	0	0	0
2:45 PM	0	0	0	0
3:00 PM	0	0	0	0
3:15 PM	0	0	0	0
3:30 PM	0	0	0	0
3:45 PM	0	0	0	0
4:00 PM	0	0	0	0
4:15 PM	0	0	0	0
4:30 PM	0	0	0	0
4:45 PM	0	0	0	0
5:00 PM	0	0	0	0
5:15 PM	0	0	0	0
5:30 PM	0	0	0	0
5:45 PM	0	0	0	0
6:00 PM	0	0	0	0
6:15 PM	0	0	0	0
6:30 PM	0	0	0	0
6:45 PM	0	0	0	0
7:00 PM	0	0	0	0
7:15 PM	0	0	0	0
7:30 PM	0	0	0	0
7:45 PM	0	0	0	0
8:00 PM	0	0	0	0
8:15 PM	0	0	0	0
8:30 PM	0	0	0	0
8:45 PM	0	0	0	0
9:00 PM	0	0	0	0
9:15 PM	0	0	0	0
9:30 PM	0	0	0	0
9:45 PM	0	0	0	0
10:00 PM	0	0	0	0
10:15 PM	0	0	0	0
10:30 PM	0	0	0	0
10:45 PM	0	0	0	0
11:00 PM	0	0	0	0
11:15 PM	0	0	0	0
11:30 PM	0	0	0	0
11:45 PM	0	0	0	0

PM Total	0	0	0	0
Percentage	#DIV/0!	#DIV/0!	#DIV/0!	
PM Peak	12:00 PM	12:00 PM	12:00 PM	12:00 PM
Volume	0	0	0	0

Day Total	0	0	0	0
Percentage	#DIV/0!	#DIV/0!	34 #DIV/0!	



Burton Street  
south of Massachusetts Ave  
City, State: Arlington, MA  
Client: Nitsch Eng/B.Zimolka  
Site Code: TBD



Count Date: Tuesday, February 4, 2020  
Direction: WB

AM	Cars	Single Unit Heavy	Multi Unit Heavy	Total	PM	Cars	Single Unit Heavy	Multi Unit Heavy	Total
12:00 AM	0	0	0	0	12:00 PM	0	0	0	0
12:15 AM	0	0	0	0	12:15 PM	0	0	0	0
12:30 AM	0	0	0	0	12:30 PM	0	0	0	0
12:45 AM	0	0	0	0	12:45 PM	0	0	0	0
1:00 AM	0	0	0	0	1:00 PM	0	0	0	0
1:15 AM	0	0	0	0	1:15 PM	0	0	0	0
1:30 AM	0	0	0	0	1:30 PM	0	0	0	0
1:45 AM	0	0	0	0	1:45 PM	0	0	0	0
2:00 AM	0	0	0	0	2:00 PM	0	0	0	0
2:15 AM	0	0	0	0	2:15 PM	0	0	0	0
2:30 AM	0	0	0	0	2:30 PM	0	0	0	0
2:45 AM	0	0	0	0	2:45 PM	0	0	0	0
3:00 AM	0	0	0	0	3:00 PM	0	0	0	0
3:15 AM	0	0	0	0	3:15 PM	0	0	0	0
3:30 AM	0	0	0	0	3:30 PM	0	0	0	0
3:45 AM	0	0	0	0	3:45 PM	0	0	0	0
4:00 AM	0	0	0	0	4:00 PM	0	0	0	0
4:15 AM	0	0	0	0	4:15 PM	0	0	0	0
4:30 AM	0	0	0	0	4:30 PM	0	0	0	0
4:45 AM	0	0	0	0	4:45 PM	0	0	0	0
5:00 AM	0	0	0	0	5:00 PM	0	0	0	0
5:15 AM	0	0	0	0	5:15 PM	0	0	0	0
5:30 AM	0	0	0	0	5:30 PM	0	0	0	0
5:45 AM	0	0	0	0	5:45 PM	0	0	0	0
6:00 AM	0	0	0	0	6:00 PM	0	0	0	0
6:15 AM	0	0	0	0	6:15 PM	0	0	0	0
6:30 AM	0	0	0	0	6:30 PM	0	0	0	0
6:45 AM	0	0	0	0	6:45 PM	0	0	0	0
7:00 AM	0	0	0	0	7:00 PM	0	0	0	0
7:15 AM	0	0	0	0	7:15 PM	0	0	0	0
7:30 AM	0	0	0	0	7:30 PM	0	0	0	0
7:45 AM	0	0	0	0	7:45 PM	0	0	0	0
8:00 AM	0	0	0	0	8:00 PM	0	0	0	0
8:15 AM	0	0	0	0	8:15 PM	0	0	0	0
8:30 AM	0	0	0	0	8:30 PM	0	0	0	0
8:45 AM	0	0	0	0	8:45 PM	0	0	0	0
9:00 AM	0	0	0	0	9:00 PM	0	0	0	0
9:15 AM	0	0	0	0	9:15 PM	0	0	0	0
9:30 AM	0	0	0	0	9:30 PM	0	0	0	0
9:45 AM	0	0	0	0	9:45 PM	0	0	0	0
10:00 AM	0	0	0	0	10:00 PM	0	0	0	0
10:15 AM	0	0	0	0	10:15 PM	0	0	0	0
10:30 AM	0	0	0	0	10:30 PM	0	0	0	0
10:45 AM	0	0	0	0	10:45 PM	0	0	0	0
11:00 AM	0	0	0	0	11:00 PM	0	0	0	0
11:15 AM	0	0	0	0	11:15 PM	0	0	0	0
11:30 AM	0	0	0	0	11:30 PM	0	0	0	0
11:45 AM	0	0	0	0	11:45 PM	0	0	0	0
AM Total	0	0	0	0	PM Total	0	0	0	0
Percentage	#DIV/0!	#DIV/0!	#DIV/0!		Percentage	#DIV/0!	#DIV/0!	#DIV/0!	
AM Peak	12:00 AM	12:00 AM	12:00 AM	12:00 AM	PM Peak	12:00 PM	12:00 PM	12:00 PM	12:00 PM
Volume	0	0	0	0	Volume	0	0	0	0
					Day Total	0	0	0	0
					Percentage	#DIV/0!	#DIV/0!	35 #DIV/0!	



Burton Street  
south of Massachusetts Ave  
City, State: Arlington, MA  
Client: Nitsch Eng/B.Zimolka  
Site Code: TBD



Count Date: Wednesday, February 5, 2020  
Direction: WB

AM	Cars	Single Unit Heavy	Multi Unit Heavy	Total	PM	Cars	Single Unit Heavy	Multi Unit Heavy	Total
12:00 AM	0	0	0	0	12:00 PM	0	0	0	0
12:15 AM	0	0	0	0	12:15 PM	0	0	0	0
12:30 AM	0	0	0	0	12:30 PM	0	0	0	0
12:45 AM	0	0	0	0	12:45 PM	0	0	0	0
1:00 AM	0	0	0	0	1:00 PM	0	0	0	0
1:15 AM	0	0	0	0	1:15 PM	0	0	0	0
1:30 AM	0	0	0	0	1:30 PM	0	0	0	0
1:45 AM	0	0	0	0	1:45 PM	0	0	0	0
2:00 AM	0	0	0	0	2:00 PM	0	0	0	0
2:15 AM	0	0	0	0	2:15 PM	0	0	0	0
2:30 AM	0	0	0	0	2:30 PM	0	0	0	0
2:45 AM	0	0	0	0	2:45 PM	0	0	0	0
3:00 AM	0	0	0	0	3:00 PM	0	0	0	0
3:15 AM	0	0	0	0	3:15 PM	0	0	0	0
3:30 AM	0	0	0	0	3:30 PM	0	0	0	0
3:45 AM	0	0	0	0	3:45 PM	0	0	0	0
4:00 AM	0	0	0	0	4:00 PM	0	0	0	0
4:15 AM	0	0	0	0	4:15 PM	0	0	0	0
4:30 AM	0	0	0	0	4:30 PM	0	0	0	0
4:45 AM	0	0	0	0	4:45 PM	0	0	0	0
5:00 AM	0	0	0	0	5:00 PM	0	0	0	0
5:15 AM	0	0	0	0	5:15 PM	0	0	0	0
5:30 AM	0	0	0	0	5:30 PM	0	0	0	0
5:45 AM	0	0	0	0	5:45 PM	0	0	0	0
6:00 AM	0	0	0	0	6:00 PM	0	0	0	0
6:15 AM	0	0	0	0	6:15 PM	0	0	0	0
6:30 AM	0	0	0	0	6:30 PM	0	0	0	0
6:45 AM	0	0	0	0	6:45 PM	0	0	0	0
7:00 AM	0	0	0	0	7:00 PM	0	0	0	0
7:15 AM	0	0	0	0	7:15 PM	0	0	0	0
7:30 AM	0	0	0	0	7:30 PM	0	0	0	0
7:45 AM	0	0	0	0	7:45 PM	0	0	0	0
8:00 AM	0	0	0	0	8:00 PM	0	0	0	0
8:15 AM	0	0	0	0	8:15 PM	0	0	0	0
8:30 AM	0	0	0	0	8:30 PM	0	0	0	0
8:45 AM	0	0	0	0	8:45 PM	0	0	0	0
9:00 AM	0	0	0	0	9:00 PM	0	0	0	0
9:15 AM	0	0	0	0	9:15 PM	0	0	0	0
9:30 AM	0	0	0	0	9:30 PM	0	0	0	0
9:45 AM	0	0	0	0	9:45 PM	0	0	0	0
10:00 AM	0	0	0	0	10:00 PM	0	0	0	0
10:15 AM	0	0	0	0	10:15 PM	0	0	0	0
10:30 AM	0	0	0	0	10:30 PM	0	0	0	0
10:45 AM	0	0	0	0	10:45 PM	0	0	0	0
11:00 AM	0	0	0	0	11:00 PM	0	0	0	0
11:15 AM	0	0	0	0	11:15 PM	0	0	0	0
11:30 AM	0	0	0	0	11:30 PM	0	0	0	0
11:45 AM	0	0	0	0	11:45 PM	0	0	0	0
AM Total	0	0	0	0	PM Total	0	0	0	0
Percentage	#DIV/0!	#DIV/0!	#DIV/0!		Percentage	#DIV/0!	#DIV/0!	#DIV/0!	
AM Peak	12:00 AM	12:00 AM	12:00 AM	12:00 AM	PM Peak	12:00 PM	12:00 PM	12:00 PM	12:00 PM
Volume	0	0	0	0	Volume	0	0	0	0
					Day Total	0	0	0	0
					Percentage	#DIV/0!	#DIV/0!	36 #DIV/0!	



Burton Street  
south of Massachusetts Ave  
City, State: Arlington, MA  
Client: Nitsch Eng/B.Zimolka  
Site Code: TBD



PDI File # 207450 E

Direction: EB

## Weekly Report

Day Date	Tuesday 02/04/20		Wednesday 02/05/20												Week Ave	
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
12:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Day Total	0		0		0		0		0		0		0		0	
Peak HR	12:00 AM	12:00 PM	12:00 AM	12:00 PM											12:00 AM	12:00 PM
Volume	0	0	0	0											0	0



Burton Street  
south of Massachusetts Ave  
City, State: Arlington, MA  
Client: Nitsch Eng/B.Zimolka  
Site Code: TBD



PDI File # 207450 E

Direction: WB

## Weekly Report

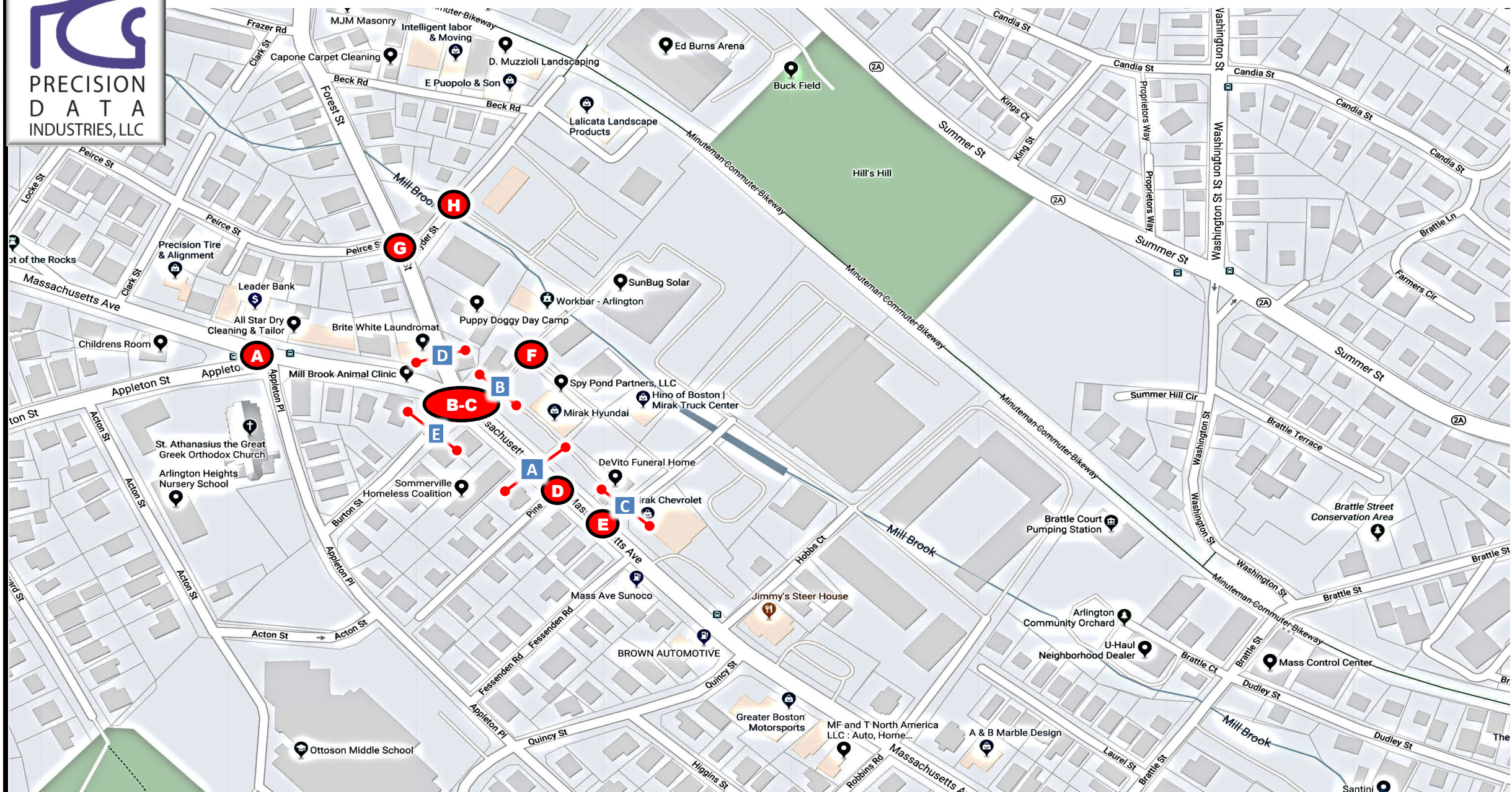
Day Date	Tuesday 02/04/20		Wednesday 02/05/20												Week Ave	
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
12:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Day Total	0		0		0		0		0		0		0		0	
Peak HR	12:00 AM	12:00 PM	12:00 AM	12:00 PM											12:00 AM	12:00 PM
Volume	0	0	0	0											0	0





Location Map: 207450 Arlington, MA

Precision Data Industries, LLC 46 Morton Street, Framingham, MA 01702 ph: 508-875-0100 email: datarequests@pdillc.com



Client: Nitsch Engineering	Engineer: B. Zimolka	Site Code: TBD	Date: Tues 2/4-Wed 2/5/20	PDI Job # 207450	City, State: Arlington, MA
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PDI File #: 207450 A  
 Location: N: Driveway S: Appleton Place  
 Location: E: Massachusetts Avenue W: Massachusetts Avenue SW: Appleton Street  
 City, State: Arlington, MA  
 Client: Nitsch Eng/B.Zimolka  
 Site Code: TBD  
 Count Date: Tuesday, February 4, 2020  
 Start Time: 7:00 AM  
 End Time: 9:00 AM  
 Class:



### Cars and Heavy Vehicles (Combined)

	Driveway						Massachusetts Avenue						Appleton Place						Appleton Street						Massachusetts Avenue						
	from North						from East						from South						from Southwest						from West						
	Right	Bear Right	Thru	Left	U-Turn	Total	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Thru	Left	U-Turn	Total	
7:00 AM	0	0	0	0	0	0	0	72	61	0	0	133	2	0	3	3	0	8	0	22	0	1	0	23	2	1	83	0	0	86	250
7:15 AM	0	0	0	0	0	0	0	72	54	1	0	127	2	0	2	1	0	5	1	24	0	2	0	27	6	1	95	0	0	102	261
7:30 AM	0	0	0	0	0	0	0	71	76	0	0	147	4	0	1	1	0	6	1	31	0	2	0	34	6	5	84	0	0	95	282
7:45 AM	0	0	0	0	0	0	0	88	61	5	0	154	7	0	6	29	0	42	6	31	0	3	0	40	16	7	103	0	0	126	362
Total	0	0	0	0	0	0	0	303	252	6	0	561	15	0	12	34	0	61	8	108	0	8	0	124	30	14	365	0	0	409	1155
8:00 AM	0	0	0	0	0	0	0	117	65	4	0	186	4	0	3	4	0	11	0	46	0	1	0	47	4	2	66	0	0	72	316
8:15 AM	0	0	0	0	0	0	0	73	63	2	0	138	3	0	1	1	0	5	1	37	0	0	0	38	4	1	78	0	0	83	264
8:30 AM	0	0	0	0	0	0	0	72	51	3	0	126	2	0	0	4	0	6	1	29	0	5	0	35	5	0	84	0	0	89	256
8:45 AM	0	0	0	0	0	0	0	92	47	3	0	142	0	0	2	1	0	3	0	30	0	2	0	32	1	3	83	1	0	88	265
Total	0	0	0	0	0	0	0	354	226	12	0	592	9	0	6	10	0	25	2	142	0	8	0	152	14	6	311	1	0	332	1101
Grand Total	0	0	0	0	0	0	0	657	478	18	0	1153	24	0	18	44	0	86	10	250	0	16	0	276	44	20	676	1	0	741	2256
Approach %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	57.0	41.5	1.6	0.0	27.9	0.0	20.9	51.2	0.0	3.6	90.6	0.0	5.8	0.0	0.0	0.0	5.9	2.7	91.2	0.1	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	29.1	21.2	0.8	0.0	51.1	1.1	0.0	0.8	2.0	0.0	3.8	0.4	11.1	0.0	0.7	0.0	12.2	2.0	0.9	30.0	0.0	0.0	32.8	
Exiting Leg Total	1						950						48						566						691						2256
Cars	0	0	0	0	0	0	0	600	465	18	0	1083	24	0	17	41	0	82	9	247	0	15	0	271	43	19	613	1	0	676	2112
% Cars	0.0	0.0	0.0	0.0	0.0	0.0	0.0	91.3	97.3	100.0	0.0	93.9	100.0	0.0	94.4	93.2	0.0	95.3	90.0	98.8	0.0	93.8	0.0	98.2	97.7	95.0	90.7	100.0	0.0	91.2	93.6
Exiting Leg Total	1						884						46						549						632						2112
Heavy Vehicles	0	0	0	0	0	0	0	57	13	0	0	70	0	0	1	3	0	4	1	3	0	1	0	5	1	1	63	0	0	65	144
% Heavy Vehicles	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.7	2.7	0.0	0.0	6.1	0.0	0.0	5.6	6.8	0.0	4.7	10.0	1.2	0.0	6.3	0.0	1.8	2.3	5.0	9.3	0.0	0.0	8.8	6.4
Exiting Leg Total	0						66						2						17						59						144

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:30 AM	Driveway						Massachusetts Avenue						Appleton Place						Appleton Street						Massachusetts Avenue						Total	
	from North						from East						from South						from Southwest						from West							
	Right	Bear Right	Thru	Left	U-Turn	Total	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Thru	Left	U-Turn	Total		
7:30 AM	0	0	0	0	0	0	0	71	76	0	0	147	4	0	1	1	0	6	1	31	0	2	0	34	6	5	84	0	0	95	282	
7:45 AM	0	0	0	0	0	0	0	88	61	5	0	154	7	0	6	29	0	42	6	31	0	3	0	40	16	7	103	0	0	126	362	
8:00 AM	0	0	0	0	0	0	0	117	65	4	0	186	4	0	3	4	0	11	0	46	0	1	0	47	4	2	66	0	0	72	316	
8:15 AM	0	0	0	0	0	0	0	73	63	2	0	138	3	0	1	1	0	5	1	37	0	0	0	38	4	1	78	0	0	83	264	
Total Volume	0	0	0	0	0	0	0	349	265	11	0	625	18	0	11	35	0	64	8	145	0	6	0	159	30	15	331	0	0	376	1224	
% Approach Total	0.0	0.0	0.0	0.0	0.0	0.0	0.0	55.8	42.4	1.8	0.0	28.1	0.0	0.0	17.2	54.7	0.0	28.1	5.0	91.2	0.0	3.8	0.0	0.0	8.0	4.0	88.0	0.0	0.0	0.0	0.0	
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.746	0.872	0.550	0.000	0.840	0.643	0.000	0.458	0.302	0.000	0.381	0.333	0.788	0.000	0.500	0.000	0.846	0.469	0.536	0.803	0.000	0.000	0.746	0.845	
Cars	0	0	0	0	0	0	0	325	259	11	0	595	18	0	11	33	0	62	8	143	0	6	0	157	29	15	294	0	0	338	1152	
Cars %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	93.1	97.7	100.0	0.0	95.2	100.0	0.0	100.0	94.3	0.0	96.9	100.0	98.6	0.0	100.0	0.0	98.7	96.7	100.0	88.8	0.0	0.0	89.9	94.1	
Heavy Vehicles	0	0	0	0	0	0	0	24	6	0	0	30	0	0	0	2	0	2	0	2	0	0	0	2	1	0	37	0	0	38	72	
Heavy Vehicles %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.9	2.3	0.0	0.0	4.8	0.0	0.0	0.0	5.7	0.0	3.1	0.0	1.4	0.0	0.0	0.0	1.3	3.3	0.0	11.2	0.0	0.0	10.1	5.9	
Cars Enter Leg	0	0	0	0	0	0	0	325	259	11	0	595	18	0	11	33	0	62	8	143	0	6	0	157	29	15	294	0	0	338	1152	
Heavy Enter Leg	0	0	0	0	0	0	0	24	6	0	0	30	0	0	0	2	0	2	0	2	0	0	0	2	1	0	37	0	0	38	72	
Total Entering Leg	0	0	0	0	0	0	0	349	265	11	0	625	18	0	11	35	0	64	8	145	0	6	0	159	30	15	331	0	0	376	1224	
Cars Exiting Leg																																
Heavy Exiting Leg																																
Total Exiting Leg																																



PDI File #: **207450 A**  
 Location: **N: Driveway S: Appleton Place**  
 Location: **E: Massachusetts Avenue W: Massachusetts Avenue SW: Appleton Street**  
 City, State: **Arlington, MA**  
 Client: **Nitsch Eng/B.Zimolka**  
 Site Code: **TBD**  
 Count Date: **Tuesday, February 4, 2020**  
 Start Time: **7:00 AM**  
 End Time: **9:00 AM**  
 Class:



### Cars

	Driveway						Massachusetts Avenue						Appleton Place						Appleton Street						Massachusetts Avenue						
	from North						from East						from South						from Southwest						from West						
	Right	Bear Right	Thru	Left	U-Turn	Total	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Thru	Left	U-Turn	Total	
7:00 AM	0	0	0	0	0	0	0	59	61	0	0	120	2	0	3	2	0	7	0	21	0	1	0	22	2	1	75	0	0	78	227
7:15 AM	0	0	0	0	0	0	0	65	51	1	0	117	2	0	1	1	0	4	0	24	0	1	0	25	6	1	87	0	0	94	240
7:30 AM	0	0	0	0	0	0	0	63	76	0	0	139	4	0	1	1	0	6	1	30	0	2	0	33	6	5	72	0	0	83	261
7:45 AM	0	0	0	0	0	0	0	81	60	5	0	146	7	0	6	27	0	40	6	30	0	3	0	39	15	7	94	0	0	116	341
Total	0	0	0	0	0	0	0	268	248	6	0	522	15	0	11	31	0	57	7	105	0	7	0	119	29	14	328	0	0	371	1069
8:00 AM	0	0	0	0	0	0	0	111	64	4	0	179	4	0	3	4	0	11	0	46	0	1	0	47	4	2	61	0	0	67	304
8:15 AM	0	0	0	0	0	0	0	70	59	2	0	131	3	0	1	1	0	5	1	37	0	0	0	38	4	1	67	0	0	72	246
8:30 AM	0	0	0	0	0	0	0	66	49	3	0	118	2	0	0	4	0	6	1	29	0	5	0	35	5	0	80	0	0	85	244
8:45 AM	0	0	0	0	0	0	0	85	45	3	0	133	0	0	2	1	0	3	0	30	0	2	0	32	1	2	77	1	0	81	249
Total	0	0	0	0	0	0	0	332	217	12	0	561	9	0	6	10	0	25	2	142	0	8	0	152	14	5	285	1	0	305	1043
Grand Total	0	0	0	0	0	0	0	600	465	18	0	1083	24	0	17	41	0	82	9	247	0	15	0	271	43	19	613	1	0	676	2112
Approach %	0.0	0.0	0.0	0.0	0.0		0.0	55.4	42.9	1.7	0.0		29.3	0.0	20.7	50.0	0.0		3.3	91.1	0.0	5.5	0.0		6.4	2.8	90.7	0.1	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	28.4	22.0	0.9	0.0	51.3	1.1	0.0	0.8	1.9	0.0	3.9	0.4	11.7	0.0	0.7	0.0	12.8	2.0	0.9	29.0	0.0	0.0	32.0	
Exiting Leg Total	1						884						46						549						632						2112

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:30 AM	Driveway						Massachusetts Avenue						Appleton Place						Appleton Street						Massachusetts Avenue						Total
	from North						from East						from South						from Southwest						from West						
	Right	Bear Right	Thru	Left	U-Turn	Total	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Thru	Left	U-Turn	Total	
7:30 AM	0	0	0	0	0	0	0	63	76	0	0	139	4	0	1	1	0	6	1	30	0	2	0	33	6	5	72	0	0	83	261
7:45 AM	0	0	0	0	0	0	0	81	60	5	0	146	7	0	6	27	0	40	6	30	0	3	0	39	15	7	94	0	0	116	341
8:00 AM	0	0	0	0	0	0	0	111	64	4	0	179	4	0	3	4	0	11	0	46	0	1	0	47	4	2	61	0	0	67	304
8:15 AM	0	0	0	0	0	0	0	70	59	2	0	131	3	0	1	1	0	5	1	37	0	0	0	38	4	1	67	0	0	72	246
Total Volume	0	0	0	0	0	0	0	325	259	11	0	595	18	0	11	33	0	62	8	143	0	6	0	157	29	15	294	0	0	338	1152
% Approach Total	0.0	0.0	0.0	0.0	0.0		0.0	54.6	43.5	1.8	0.0		29.0	0.0	17.7	53.2	0.0		5.1	91.1	0.0	3.8	0.0		8.6	4.4	87.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.732	0.852	0.550	0.000	0.831	0.643	0.000	0.458	0.306	0.000	0.388	0.333	0.777	0.000	0.500	0.000	0.835	0.483	0.536	0.782	0.000	0.000	0.728	0.845
Entering Leg	0	0	0	0	0	0	0	325	259	11	0	595	18	0	11	33	0	62	8	143	0	6	0	157	29	15	294	0	0	338	1152
Exiting Leg						0						455						34						321						342	1152
Total						0						1050					96						478						680	2304	



PDI File #: 207450 A  
 Location: N: Driveway S: Appleton Place  
 Location: E: Massachusetts Avenue W: Massachusetts Avenue SW: Appleton Street  
 City, State: Arlington, MA  
 Client: Nitsch Eng/B.Zimolka  
 Site Code: TBD  
 Count Date: Tuesday, February 4, 2020  
 Start Time: 7:00 AM  
 End Time: 9:00 AM  
 Class:



### Heavy Vehicles-Combined (Buses, Single-Unit Trucks, Articulated Trucks)

	Driveway						Massachusetts Avenue						Appleton Place						Appleton Street						Massachusetts Avenue							
	from North						from East						from South						from Southwest						from West							
	Right	Bear Right	Thru	Left	U-Turn	Total	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Thru	Left	U-Turn	Total		
7:00 AM	0	0	0	0	0	0	0	13	0	0	0	13	0	0	0	1	0	1	0	1	0	0	0	1	0	0	8	0	0	8	23	
7:15 AM	0	0	0	0	0	0	0	7	3	0	0	10	0	0	1	0	0	1	1	0	0	1	0	2	0	0	8	0	0	8	21	
7:30 AM	0	0	0	0	0	0	0	8	0	0	0	8	0	0	0	0	0	0	0	1	0	0	0	1	0	0	12	0	0	12	21	
7:45 AM	0	0	0	0	0	0	0	7	1	0	0	8	0	0	0	2	0	2	0	1	0	0	0	1	1	0	9	0	0	10	21	
Total	0	0	0	0	0	0	0	35	4	0	0	39	0	0	1	3	0	4	1	3	0	1	0	5	1	0	37	0	0	38	86	
8:00 AM	0	0	0	0	0	0	0	6	1	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	5	12	
8:15 AM	0	0	0	0	0	0	0	3	4	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11	0	0	11	18	
8:30 AM	0	0	0	0	0	0	0	6	2	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	4	12	
8:45 AM	0	0	0	0	0	0	0	7	2	0	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	1	6	0	0	7	16	
Total	0	0	0	0	0	0	0	22	9	0	0	31	0	0	0	0	0	0	0	0	0	0	0	0	0	1	26	0	0	27	58	
Grand Total	0	0	0	0	0	0	0	57	13	0	0	70	0	0	1	3	0	4	1	3	0	1	0	5	1	1	63	0	0	65	144	
Approach %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	81.4	18.6	0.0	0.0	0.0	0.0	0.0	25.0	75.0	0.0	0.0	20.0	60.0	0.0	20.0	0.0	0.0	1.5	1.5	96.9	0.0	0.0	0.0	0.0	
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	39.6	9.0	0.0	0.0	48.6	0.0	0.0	0.7	2.1	0.0	2.8	0.7	2.1	0.0	0.7	0.0	3.5	0.7	0.7	43.8	0.0	0.0	45.1	0.0	
Exiting Leg Total	0						66						2						17						59						144	
Buses	0	0	0	0	0	0	0	24	0	0	0	24	0	0	0	3	0	3	0	0	0	0	0	0	0	1	0	20	0	0	21	48
% Buses	0.0	0.0	0.0	0.0	0.0	0.0	0.0	42.1	0.0	0.0	0.0	34.3	0.0	0.0	0.0	100.0	0.0	75.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	31.7	0.0	0.0	32.3	33.3
Exiting Leg Total	0						20						0						4						24						48	
Single-Unit Trucks	0	0	0	0	0	0	0	30	12	0	0	42	0	0	1	0	0	1	1	3	0	1	0	5	0	1	35	0	0	36	84	
% Single-Unit	0.0	0.0	0.0	0.0	0.0	0.0	0.0	52.6	92.3	0.0	0.0	60.0	0.0	0.0	100.0	0.0	0.0	25.0	100.0	100.0	0.0	100.0	0.0	100.0	0.0	100.0	55.6	0.0	0.0	55.4	58.3	
Exiting Leg Total	0						38						2						12						32						84	
Articulated Trucks	0	0	0	0	0	0	0	3	1	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	0	0	8	12	
% Articulated	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.3	7.7	0.0	0.0	5.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.7	0.0	0.0	12.3	8.3	
Exiting Leg Total	0						8						0						1						3						12	

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:00 AM	Driveway						Massachusetts Avenue						Appleton Place						Appleton Street						Massachusetts Avenue						
	from North						from East						from South						from Southwest						from West						
	Right	Bear Right	Thru	Left	U-Turn	Total	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Thru	Left	U-Turn	Total	
7:00 AM	0	0	0	0	0	0	0	13	0	0	0	13	0	0	0	1	0	1	0	1	0	0	0	1	0	0	8	0	0	8	23
7:15 AM	0	0	0	0	0	0	0	7	3	0	0	10	0	0	1	0	0	1	1	0	0	1	0	2	0	0	8	0	0	8	21
7:30 AM	0	0	0	0	0	0	0	8	0	0	0	8	0	0	0	0	0	0	0	1	0	0	0	1	0	0	12	0	0	12	21
7:45 AM	0	0	0	0	0	0	0	7	1	0	0	8	0	0	0	2	0	2	0	1	0	0	0	1	1	0	9	0	0	10	21
Total Volume	0	0	0	0	0	0	0	35	4	0	0	39	0	0	1	3	0	4	1	3	0	1	0	5	1	0	37	0	0	38	86
% Approach Total	0.0	0.0	0.0	0.0	0.0		0.0	89.7	10.3	0.0	0.0		0.0	0.0	25.0	75.0	0.0		20.0	60.0	0.0	20.0	0.0		2.6	0.0	97.4	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.673	0.333	0.000	0.000	0.750	0.000	0.000	0.250	0.375	0.000	0.500	0.250	0.750	0.000	0.250	0.000	0.625	0.250	0.000	0.771	0.000	0.000	0.792	0.935
Buses	0	0	0	0	0	0	0	15	0	0	0	15	0	0	0	3	0	3	0	0	0	0	0	0	1	0	9	0	0	10	28
Buses %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	42.9	0.0	0.0	0.0	38.5	0.0	0.0	0.0	100.0	0.0	75.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	24.3	0.0	0.0	26.3	32.6
Single-Unit Trucks	0	0	0	0	0	0	0	19	3	0	0	22	0	0	1	0	0	1	1	3	0	1	0	5	0	0	22	0	0	22	50
Single-Unit %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	54.3	75.0	0.0	0.0	56.4	0.0	0.0	100.0	0.0	0.0	25.0	100.0	100.0	0.0	100.0	0.0	100.0	0.0	0.0	59.5	0.0	0.0	57.9	58.1
Articulated Trucks	0	0	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0	6	8
Articulated %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.9	25.0	0.0	0.0	5.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	16.2	0.0	0.0	15.8	9.3
Buses	0	0	0	0	0	0	0	15	0	0	0	15	0	0	0	3	0	3	0	0	0	0	0	0	1	0	9	0	0	10	28
Single-Unit Trucks	0	0	0	0	0	0	0	19	3	0	0	22	0	0	1	0	0	1	1	3	0	1	0	5	0	0	22	0	0	22	50
Articulated Trucks	0	0	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0	6	8
Total Entering Leg	0	0	0	0	0	0	0	35	4	0	0	39	0	0	1	3	0	4	1	3	0	1	0	5	1	0	37	0	0	38	86
Buses	0						9						0						4						15						28
Single-Unit Trucks	0						25						1						3						21						50
Articulated Trucks	0						6						0						1						1						8
Total Exiting Leg	0						40						1						8						37						86



PDI File #: **207450 A**  
 Location: **N: Driveway S: Appleton Place**  
 Location: **E: Massachusetts Avenue W: Massachusetts Avenue SW: Appleton Street**  
 City, State: **Arlington, MA**  
 Client: **Nitsch Eng/B.Zimolka**  
 Site Code: **TBD**  
 Count Date: **Tuesday, February 4, 2020**  
 Start Time: **7:00 AM**  
 End Time: **9:00 AM**  
 Class:



### Buses

	Driveway						Massachusetts Avenue						Appleton Place						Appleton Street						Massachusetts Avenue						Total	
	from North						from East						from South						from Southwest						from West							
	Right	Bear Right	Thru	Left	U-Turn	Total	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Thru	Left	U-Turn	Total		
7:00 AM	0	0	0	0	0	0	0	5	0	0	0	5	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	4	0	0	4	10
7:15 AM	0	0	0	0	0	0	0	4	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	6	
7:30 AM	0	0	0	0	0	0	0	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	
7:45 AM	0	0	0	0	0	0	0	3	0	0	0	3	0	0	0	2	0	2	0	0	0	0	0	0	0	1	0	3	0	0	4	9
Total	0	0	0	0	0	0	0	15	0	0	0	15	0	0	0	3	0	3	0	0	0	0	0	0	0	1	0	9	0	0	10	28
8:00 AM	0	0	0	0	0	0	0	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	4	7	
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	4	4	
8:30 AM	0	0	0	0	0	0	0	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	4	
8:45 AM	0	0	0	0	0	0	0	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	5	
Total	0	0	0	0	0	0	0	9	0	0	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11	0	0	11	20
Grand Total	0	0	0	0	0	0	0	24	0	0	0	24	0	0	0	3	0	3	0	0	0	0	0	0	0	1	0	20	0	0	21	48
Approach %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.8	0.0	95.2	0.0	0.0	0.0	
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	50.0	0.0	0.0	0.0	50.0	0.0	0.0	0.0	6.3	0.0	6.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1	0.0	41.7	0.0	0.0	43.8	
Exiting Leg Total	0						20						0						4						24						48	

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:00 AM	Driveway						Massachusetts Avenue						Appleton Place						Appleton Street						Massachusetts Avenue						Total	
	from North						from East						from South						from Southwest						from West							
	Right	Bear Right	Thru	Left	U-Turn	Total	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Thru	Left	U-Turn	Total		
7:00 AM	0	0	0	0	0	0	0	5	0	0	0	5	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	4	0	0	4	10
7:15 AM	0	0	0	0	0	0	0	4	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	6	
7:30 AM	0	0	0	0	0	0	0	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	
7:45 AM	0	0	0	0	0	0	0	3	0	0	0	3	0	0	0	2	0	2	0	0	0	0	0	0	0	1	0	3	0	0	4	9
Total Volume	0	0	0	0	0	0	0	15	0	0	0	15	0	0	0	3	0	3	0	0	0	0	0	0	0	1	0	9	0	0	10	28
% Approach Total	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.0	0.0	90.0	0.0	0.0	0.0	
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.750	0.000	0.000	0.000	0.750	0.000	0.000	0.000	0.375	0.000	0.375	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.563	0.000	0.000	0.625	0.700	
Entering Leg	0	0	0	0	0	0	0	15	0	0	0	15	0	0	0	3	0	3	0	0	0	0	0	0	0	1	0	9	0	0	10	28
Exiting Leg	0						9						0						4						15						28	
Total	0						24						3						4						25						56	



PDI File #: **207450 A**  
 Location: **N: Driveway S: Appleton Place**  
 Location: **E: Massachusetts Avenue W: Massachusetts Avenue SW: Appleton Street**  
 City, State: **Arlington, MA**  
 Client: **Nitsch Eng/B.Zimolka**  
 Site Code: **TBD**  
 Count Date: **Tuesday, February 4, 2020**  
 Start Time: **7:00 AM**  
 End Time: **9:00 AM**  
 Class:



### Single-Unit Trucks

	Driveway						Massachusetts Avenue						Appleton Place						Appleton Street						Massachusetts Avenue						Total	
	from North						from East						from South						from Southwest						from West							
	Right	Bear Right	Thru	Left	U-Turn	Total	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Thru	Left	U-Turn	Total		
7:00 AM	0	0	0	0	0	0	0	8	0	0	0	8	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	3	0	0	3	12
7:15 AM	0	0	0	0	0	0	0	3	2	0	0	5	0	0	1	0	0	1	1	0	0	1	0	2	0	0	3	0	0	3	11	
7:30 AM	0	0	0	0	0	0	0	5	0	0	0	5	0	0	0	0	0	0	0	1	0	0	0	1	0	0	11	0	0	11	17	
7:45 AM	0	0	0	0	0	0	0	3	1	0	0	4	0	0	0	0	0	0	0	1	0	0	0	1	0	0	5	0	0	5	10	
Total	0	0	0	0	0	0	0	19	3	0	0	22	0	0	1	0	0	1	1	3	0	1	0	5	0	0	22	0	0	22	50	
8:00 AM	0	0	0	0	0	0	0	3	1	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	5	
8:15 AM	0	0	0	0	0	0	0	2	4	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0	6	12	
8:30 AM	0	0	0	0	0	0	0	3	2	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	8	
8:45 AM	0	0	0	0	0	0	0	3	2	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3	0	0	4	9	
Total	0	0	0	0	0	0	0	11	9	0	0	20	0	0	0	0	0	0	0	0	0	0	0	0	0	1	13	0	0	14	34	
Grand Total	0	0	0	0	0	0	0	30	12	0	0	42	0	0	1	0	0	1	1	3	0	1	0	5	0	1	35	0	0	36	84	
Approach %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	71.4	28.6	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	20.0	60.0	0.0	20.0	0.0	0.0	0.0	2.8	97.2	0.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	35.7	14.3	0.0	0.0	50.0	0.0	0.0	1.2	0.0	0.0	1.2	1.2	3.6	0.0	1.2	0.0	6.0	0.0	1.2	41.7	0.0	0.0	42.9		
Exiting Leg Total	0						38						2						12						32						84	

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:00 AM	Driveway						Massachusetts Avenue						Appleton Place						Appleton Street						Massachusetts Avenue							
	from North						from East						from South						from Southwest						from West							
	Right	Bear Right	Thru	Left	U-Turn	Total	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Thru	Left	U-Turn	Total		Total
7:00 AM	0	0	0	0	0	0	0	8	0	0	0	8	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	3	0	0	3	12
7:15 AM	0	0	0	0	0	0	0	3	2	0	0	5	0	0	1	0	0	1	1	0	0	1	0	2	0	0	3	0	0	3	11	
7:30 AM	0	0	0	0	0	0	0	5	0	0	0	5	0	0	0	0	0	0	0	1	0	0	0	1	0	0	11	0	0	11	17	
7:45 AM	0	0	0	0	0	0	0	3	1	0	0	4	0	0	0	0	0	0	0	1	0	0	0	1	0	0	5	0	0	5	10	
Total Volume	0	0	0	0	0	0	0	19	3	0	0	22	0	0	1	0	0	1	1	3	0	1	0	5	0	0	22	0	0	22	50	
% Approach Total	0.0	0.0	0.0	0.0	0.0	0	0.0	86.4	13.6	0.0	0.0		0.0	0.0	100.0	0.0	0.0		20.0	60.0	0.0	20.0	0.0		0.0	0.0	100.0	0.0	0.0			
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.594	0.375	0.000	0.000	0.688	0.000	0.000	0.250	0.000	0.000	0.250	0.250	0.750	0.000	0.250	0.000	0.625	0.000	0.000	0.500	0.000	0.000	0.500	0.735	
Entering Leg	0	0	0	0	0	0	0	19	3	0	0	22	0	0	1	0	0	1	1	3	0	1	0	5	0	0	22	0	0	22	50	
Exiting Leg						0						25						1					3						21	50		
Total												47						2					8						43	100		



PDI File #: **207450 A**  
 Location: **N: Driveway S: Appleton Place**  
 Location: **E: Massachusetts Avenue W: Massachusetts Avenue SW: Appleton Street**  
 City, State: **Arlington, MA**  
 Client: **Nitsch Eng/B.Zimolka**  
 Site Code: **TBD**  
 Count Date: **Tuesday, February 4, 2020**  
 Start Time: **7:00 AM**  
 End Time: **9:00 AM**  
 Class:



### Articulated Trucks

	Driveway						Massachusetts Avenue						Appleton Place						Appleton Street						Massachusetts Avenue						Total
	from North						from East						from South						from Southwest						from West						
	Right	Bear Right	Thru	Left	U-Turn	Total	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Thru	Left	U-Turn	Total	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
7:15 AM	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	4
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
7:45 AM	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	2
Total	0	0	0	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0	6	8
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	2
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	2
Total	0	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	4
Grand Total	0	0	0	0	0	0	0	0	3	1	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	8	0	0	8	12
Approach %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	75.0	25.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25.0	8.3	0.0	0.0	33.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	66.7	0.0	0.0	66.7	
Exiting Leg Total	0						8						0						1						3						12

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:00 AM	Driveway						Massachusetts Avenue						Appleton Place						Appleton Street						Massachusetts Avenue						Total
	from North						from East						from South						from Southwest						from West						
	Right	Bear Right	Thru	Left	U-Turn	Total	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Thru	Left	U-Turn	Total	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
7:15 AM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	4
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
7:45 AM	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	2
Total Volume	0	0	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0	6	8
% Approach Total	0.0	0.0	0.0	0.0	0.0	0.0	0.0	50.0	50.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.250	0.000	0.000	0.500	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.500	0.000	0.000	0.500	0.500
Entering Leg	0	0	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0	6	8
Exiting Leg	0						6						0						1						1						8
Total	0						8						0						1						7						16



PDI File #: **207450 A**  
 Location: **N: Driveway S: Appleton Place**  
 Location: **E: Massachusetts Avenue W: Massachusetts Avenue SW: Appleton Street**  
 City, State: **Arlington, MA**  
 Client: **Nitsch Eng/B.Zimolka**  
 Site Code: **TBD**  
 Count Date: **Tuesday, February 4, 2020**  
 Start Time: **7:00 AM**  
 End Time: **9:00 AM**  
 Class:



**Bicycles (on Roadway and Crosswalks)**

	Driveway								Massachusetts Avenue								Appleton Place								Appleton Street								Massachusetts Avenue								Total	
	from North								from East								from South								from Southwest								from West									
	Right	Bear Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Bear Left	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	Hard Left	U-Turn	CW-WB	CW-EB	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	CW-NWB	CW-SEB	Total	Hard Right	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
7:30 AM	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2	4		
7:45 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
Total	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	3	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2	6		
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1		
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1	0	0	2	0	0	0	2	4	
8:45 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	0	0	0	0	0	2	
Total	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1	0	0	0	0	0	0	1	0	4	0	0	0	0	0	0	4	0	0	2	0	0	0	2	8	
Grand Total	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	4	1	0	0	0	0	1	0	2	0	4	0	0	0	0	0	0	4	0	0	4	0	0	0	0	4	14
Approach %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	50.0	0.0	0.0	0.0	0.0	50.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	28.6	0.0	0.0	0.0	0.0	0.0	28.6	7.1	0.0	0.0	0.0	0.0	7.1	0.0	14.3	0.0	28.6	0.0	0.0	0.0	0.0	0.0	0.0	28.6	0.0	0.0	28.6	0.0	0.0	0.0	28.6		
Exiting Leg Total	0								9								1								0								4								14	

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

8:00 AM	Driveway								Massachusetts Avenue								Appleton Place								Appleton Street								Massachusetts Avenue								Total		
	from North								from East								from South								from Southwest								from West										
	Right	Bear Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Bear Left	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	Hard Left	U-Turn	CW-WB	CW-EB	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	CW-NWB	CW-SEB	Total	Hard Right	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total			
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1	0	0	2	0	0	0	0	2	4
8:45 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	2
Total Volume	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1	0	0	0	0	0	0	1	0	4	0	0	0	0	0	0	4	0	0	2	0	0	0	0	2	8
% Approach Total	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	100.0	0.0	0.0	0.0	0.0			
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.250	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	1.000	0.000	0.000	0.000	0.000	0.000	0.000	1.000	0.000	0.000	0.250	0.000	0.000	0.000	0.250		0.500	
Entering Leg	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1	0	0	0	0	0	0	1	0	4	0	0	0	0	0	0	4	0	0	2	0	0	0	2	8	
Exiting Leg	0								7								0								0								1								8		
Total	0								8								1								4								3								16		



PDI File #: **207450 A**  
 Location: **N: Driveway S: Appleton Place**  
 Location: **E: Massachusetts Avenue W: Massachusetts Avenue SW: Appleton Street**  
 City, State: **Arlington, MA**  
 Client: **Nitsch Eng/B.Zimolka**  
 Site Code: **TBD**  
 Count Date: **Tuesday, February 4, 2020**  
 Start Time: **7:00 AM**  
 End Time: **9:00 AM**  
 Class:



### Pedestrians

	Driveway								Massachusetts Avenue								Appleton Place								Appleton Street								Massachusetts Avenue								Total
	from North								from East								from South								from Southwest								from West								
	Right	Bear Right	Thru	Left	U-Turn	CW-SB	CW-WB	Total	Right	Thru	Bear Left	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	Hard Left	U-Turn	CW-WB	CW-EB	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	CW-NWB	CW-SEB	Total	Hard Right	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	
7:00 AM	0	0	0	0	0	10	1	11	0	0	0	0	0	12	0	12	0	0	0	0	0	14	0	14	0	0	0	0	0	5	0	5	0	0	0	0	0	0	1	1	43
7:15 AM	0	0	0	0	0	6	1	7	0	0	0	0	0	23	0	23	0	0	0	0	0	15	0	15	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1	1	47
7:30 AM	0	0	0	0	0	57	0	57	0	0	0	0	0	56	0	56	0	0	0	0	0	47	2	49	0	0	0	0	0	2	7	9	0	0	0	0	0	0	8	8	179
7:45 AM	0	0	0	0	0	22	0	22	0	0	0	0	0	25	2	27	0	0	0	0	0	12	1	13	0	0	0	0	0	1	2	3	0	0	0	0	0	0	1	1	66
Total	0	0	0	0	0	95	2	97	0	0	0	0	0	116	2	118	0	0	0	0	0	88	3	91	0	0	0	0	0	8	10	18	0	0	0	0	0	0	11	11	335
8:00 AM	0	0	0	0	0	4	0	4	0	0	0	0	0	5	0	5	0	0	0	0	0	4	0	4	0	0	0	0	0	1	1	2	0	0	0	0	0	0	0	0	15
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	
8:30 AM	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	2	0	0	0	0	0	2	0	2	0	0	0	0	2	0	2	8	
8:45 AM	0	0	0	0	0	1	2	3	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	2	2	9	
Total	0	0	0	0	0	5	4	9	0	0	0	0	0	5	3	8	0	0	0	0	0	4	3	7	0	0	0	0	0	5	1	6	0	0	0	0	0	2	2	4	34
Grand Total	0	0	0	0	0	100	6	106	0	0	0	0	0	121	5	126	0	0	0	0	0	92	6	98	0	0	0	0	0	13	11	24	0	0	0	0	0	2	13	15	369
Approach %	0	0	0	0	0	94.3	5.66		0	0	0	0	0	96	3.97		0	0	0	0	0	93.9	6.12		0	0	0	0	0	54.2	45.8		0	0	0	0	0	13.3	86.7		
Total %	0	0	0	0	0	27.1	1.63	28.7	0	0	0	0	0	32.8	1.36	34.1	0	0	0	0	0	24.9	1.63	26.6	0	0	0	0	0	3.52	2.98	6.5	0	0	0	0	0	0.54	3.52	4.07	
Exiting Leg Total	106								126								98								24								15								369

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:00 AM	Driveway								Massachusetts Avenue								Appleton Place								Appleton Street								Massachusetts Avenue								Total	
	from North								from East								from South								from Southwest								from West									
	Right	Bear Right	Thru	Left	U-Turn	CW-SB	CW-WB	Total	Right	Thru	Bear Left	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	Hard Left	U-Turn	CW-WB	CW-EB	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	CW-WNB	CW-SEB	Total	Hard Right	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total		
7:00 AM	0	0	0	0	0	10	1	11	0	0	0	0	0	12	0	12	0	0	0	0	0	14	0	14	0	0	0	0	0	5	0	5	0	0	0	0	0	0	0	1	1	43
7:15 AM	0	0	0	0	0	6	1	7	0	0	0	0	0	23	0	23	0	0	0	0	0	15	0	15	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	1	1	47
7:30 AM	0	0	0	0	0	57	0	57	0	0	0	0	0	56	0	56	0	0	0	0	0	47	2	49	0	0	0	0	0	2	7	9	0	0	0	0	0	0	0	8	8	179
7:45 AM	0	0	0	0	0	22	0	22	0	0	0	0	0	25	2	27	0	0	0	0	0	12	1	13	0	0	0	0	0	1	2	3	0	0	0	0	0	0	0	1	1	66
Total Volume	0	0	0	0	0	95	2	97	0	0	0	0	0	116	2	118	0	0	0	0	0	88	3	91	0	0	0	0	0	8	10	18	0	0	0	0	0	0	0	11	11	335
% Approach Total	0.0	0.0	0.0	0.0	0.0	97.9	2.1		0.0	0.0	0.0	0.0	0.0	98.3	1.7		0.0	0.0	0.0	0.0	0.0	96.7	3.3		0.0	0.0	0.0	0.0	0.0	44.4	55.6		0.0	0.0	0.0	0.0	0.0	0.0	100.0			
PHF	0.000	0.000	0.000	0.000	0.000	0.417	0.500	0.425	0.000	0.000	0.000	0.000	0.000	0.518	0.250	0.527	0.000	0.000	0.000	0.000	0.000	0.468	0.375	0.464	0.000	0.000	0.000	0.000	0.000	0.400	0.357	0.500	0.000	0.000	0.000	0.000	0.000	0.344	0.344	0.468		
Entering Leg	0	0	0	0	0	95	2	97	0	0	0	0	0	116	2	118	0	0	0	0	0	88	3	91	0	0	0	0	0	8	10	18	0	0	0	0	0	0	0	11	11	335
Exiting Leg	97								118								91								18								11								335	
Total	194								236								182								36								22								670	



PDI File #: 207450 AA  
 Location: N: Driveway S: Appleton Place  
 Location: E: Massachusetts Avenue W: Massachusetts Avenue SW: Appleton Street  
 City, State: Arlington, MA  
 Client: Nitsch Eng/B.Zimolka  
 Site Code: TBD  
 Count Date: Tuesday, February 4, 2020  
 Start Time: 4:00 PM  
 End Time: 6:00 PM  
 Class:



### Cars and Heavy Vehicles (Combined)

	Driveway						Massachusetts Avenue						Appleton Place						Appleton Street						Massachusetts Avenue						
	from North						from East						from South						from Southwest						from West						
	Right	Bear Right	Thru	Left	U-Turn	Total	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Thru	Left	U-Turn	Total	
4:00 PM	1	0	0	0	0	1	1	84	39	0	0	124	2	0	2	2	0	6	1	46	0	3	0	50	1	2	99	1	0	103	284
4:15 PM	1	0	0	0	0	1	0	71	30	0	0	101	0	0	1	1	0	2	0	51	0	4	0	55	2	5	101	0	0	108	267
4:30 PM	1	1	0	0	0	2	0	84	27	2	0	113	0	0	1	0	0	1	2	57	0	3	0	62	1	5	92	2	0	100	278
4:45 PM	0	0	0	0	0	0	1	85	47	1	0	134	2	0	2	2	0	6	1	49	1	3	0	54	3	2	108	0	0	113	307
Total	3	1	0	0	0	4	2	324	143	3	0	472	4	0	6	5	0	15	4	203	1	13	0	221	7	14	400	3	0	424	1136
5:00 PM	1	0	0	0	0	1	1	77	39	1	0	118	2	0	2	0	0	4	1	74	0	1	0	76	3	0	89	0	0	92	291
5:15 PM	0	1	0	0	0	1	0	66	20	0	0	86	5	1	0	1	0	7	2	86	0	2	0	90	1	3	109	1	0	114	298
5:30 PM	1	0	0	1	0	2	0	78	20	0	0	98	4	0	4	2	0	10	1	87	0	4	0	92	1	5	108	2	0	116	318
5:45 PM	1	0	0	0	0	1	1	88	31	0	0	120	3	0	2	0	0	5	1	70	0	3	0	74	4	1	105	0	0	110	310
Total	3	1	0	1	0	5	2	309	110	1	0	422	14	1	8	3	0	26	5	317	0	10	0	332	9	9	411	3	0	432	1217
Grand Total	6	2	0	1	0	9	4	633	253	4	0	894	18	1	14	8	0	41	9	520	1	23	0	553	16	23	811	6	0	856	2353
Approach %	66.7	22.2	0.0	11.1	0.0		0.4	70.8	28.3	0.4	0.0		43.9	2.4	34.1	19.5	0.0		1.6	94.0	0.2	4.2	0.0		1.9	2.7	94.7	0.7	0.0		
Total %	0.3	0.1	0.0	0.0	0.0	0.4	0.2	26.9	10.8	0.2	0.0	38.0	0.8	0.0	0.6	0.3	0.0	1.7	0.4	22.1	0.0	1.0	0.0	23.5	0.7	1.0	34.5	0.3	0.0	36.4	
Exiting Leg Total	12						1350						36						279						676						2353
Cars	6	2	0	1	0	9	4	616	251	4	0	875	18	1	14	8	0	41	9	512	1	23	0	545	16	23	791	6	0	836	2306
% Cars	100.0	100.0	0.0	100.0	0.0	100.0	100.0	97.3	99.2	100.0	0.0	97.9	100.0	100.0	100.0	0.0	100.0		100.0	98.5	100.0	100.0	0.0	98.6	100.0	100.0	97.5	100.0	0.0	97.7	98.0
Exiting Leg Total	12						1322						36						277						659						2306
Heavy Vehicles	0	0	0	0	0	0	0	17	2	0	0	19	0	0	0	0	0	0	0	8	0	0	0	8	0	0	20	0	0	20	47
% Heavy Vehicles	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.7	0.8	0.0	0.0	2.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	0.0	0.0	0.0	1.4	0.0	0.0	2.5	0.0	0.0	2.3	2.0
Exiting Leg Total	0						28						0						2						17						47

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

5:00 PM	Driveway						Massachusetts Avenue						Appleton Place						Appleton Street						Massachusetts Avenue						Total
	from North						from East						from South						from Southwest						from West						
	Right	Bear Right	Thru	Left	U-Turn	Total	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Thru	Left	U-Turn	Total	
5:00 PM	1	0	0	0	0	1	1	77	39	1	0	118	2	0	2	0	0	4	1	74	0	1	0	76	3	0	89	0	0	92	291
5:15 PM	0	1	0	0	0	1	0	66	20	0	0	86	5	1	0	1	0	7	2	86	0	2	0	90	1	3	109	1	0	114	298
5:30 PM	1	0	0	1	0	2	0	78	20	0	0	98	4	0	4	2	0	10	1	87	0	4	0	92	1	5	108	2	0	116	318
5:45 PM	1	0	0	0	0	1	1	88	31	0	0	120	3	0	2	0	0	5	1	70	0	3	0	74	4	1	105	0	0	110	310
Total Volume	3	1	0	1	0	5	2	309	110	1	0	422	14	1	8	3	0	26	5	317	0	10	0	332	9	9	411	3	0	432	1217
% Approach Total	60.0	20.0	0.0	20.0	0.0		0.5	73.2	26.1	0.2	0.0		53.8	3.8	30.8	11.5	0.0		1.5	95.5	0.0	3.0	0.0		2.1	2.1	95.1	0.7	0.0		
PHF	0.750	0.250	0.000	0.250	0.000	0.625	0.500	0.878	0.705	0.250	0.000	0.879	0.700	0.250	0.500	0.375	0.000	0.650	0.625	0.911	0.000	0.625	0.000	0.902	0.563	0.450	0.943	0.375	0.000	0.931	0.957
Cars	3	1	0	1	0	5	2	301	109	1	0	413	14	1	8	3	0	26	5	315	0	10	0	330	9	9	401	3	0	422	1196
Cars %	100.0	100.0	0.0	100.0	0.0	100.0	100.0	97.4	99.1	100.0	0.0	97.9	100.0	100.0	100.0	0.0	100.0		100.0	99.4	0.0	100.0	0.0	99.4	100.0	100.0	97.6	100.0	0.0	97.7	98.3
Heavy Vehicles	0	0	0	0	0	0	0	8	1	0	0	9	0	0	0	0	0	0	0	2	0	0	0	2	0	0	10	0	0	10	21
Heavy Vehicles %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6	0.9	0.0	0.0	2.1	0.0	0.0	0.0	0.0	0.0		0.0	0.6	0.0	0.0	0.0	0.6	0.0	0.0	2.4	0.0	0.0	2.3	1.7
Cars Enter Leg	3	1	0	1	0	5	2	301	109	1	0	413	14	1	8	3	0	26	5	315	0	10	0	330	9	9	401	3	0	422	1196
Heavy Enter Leg	0	0	0	0	0	0	0	8	1	0	0	9	0	0	0	0	0	0	0	2	0	0	0	2	0	0	10	0	0	10	21
Total Entering Leg	3	1	0	1	0	5	2	309	110	1	0	422	14	1	8	3	0	26	5	317	0	10	0	332	9	9	411	3	0	432	1217
Cars Exiting Leg	6						731						15						122						322						1196
Heavy Exiting Leg	0						12						0						1						8						21
Total Exiting Leg	6						743						15						123						330						1217



PDI File #: **207450 AA**  
 Location: **N: Driveway S: Appleton Place**  
 Location: **E: Massachusetts Avenue W: Massachusetts Avenue SW: Appleton Street**  
 City, State: **Arlington, MA**  
 Client: **Nitsch Eng/B.Zimolka**  
 Site Code: **TBD**  
 Count Date: **Tuesday, February 4, 2020**  
 Start Time: **4:00 PM**  
 End Time: **6:00 PM**  
 Class:



### Cars

	Driveway						Massachusetts Avenue						Appleton Place						Appleton Street						Massachusetts Avenue						Total
	from North						from East						from South						from Southwest						from West						
	Right	Bear Right	Thru	Left	U-Turn	Total	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Thru	Left	U-Turn	Total	
4:00 PM	1	0	0	0	0	1	1	82	38	0	0	121	2	0	2	2	0	6	1	44	0	3	0	48	1	2	96	1	0	100	276
4:15 PM	1	0	0	0	0	1	0	69	30	0	0	99	0	0	1	1	0	2	0	50	0	4	0	54	2	5	98	0	0	105	261
4:30 PM	1	1	0	0	0	2	0	81	27	2	0	110	0	0	1	0	0	1	2	56	0	3	0	61	1	5	91	2	0	99	273
4:45 PM	0	0	0	0	0	0	1	83	47	1	0	132	2	0	2	2	0	6	1	47	1	3	0	52	3	2	105	0	0	110	300
Total	3	1	0	0	0	4	2	315	142	3	0	462	4	0	6	5	0	15	4	197	1	13	0	215	7	14	390	3	0	414	1110
5:00 PM	1	0	0	0	0	1	1	72	38	1	0	112	2	0	2	0	0	4	1	74	0	1	0	76	3	0	86	0	0	89	282
5:15 PM	0	1	0	0	0	1	0	66	20	0	0	86	5	1	0	1	0	7	2	86	0	2	0	90	1	3	106	1	0	111	295
5:30 PM	1	0	0	1	0	2	0	77	20	0	0	97	4	0	4	2	0	10	1	86	0	4	0	91	1	5	105	2	0	113	313
5:45 PM	1	0	0	0	0	1	1	86	31	0	0	118	3	0	2	0	0	5	1	69	0	3	0	73	4	1	104	0	0	109	306
Total	3	1	0	1	0	5	2	301	109	1	0	413	14	1	8	3	0	26	5	315	0	10	0	330	9	9	401	3	0	422	1196
Grand Total	6	2	0	1	0	9	4	616	251	4	0	875	18	1	14	8	0	41	9	512	1	23	0	545	16	23	791	6	0	836	2306
Approach %	66.7	22.2	0.0	11.1	0.0		0.5	70.4	28.7	0.5	0.0		43.9	2.4	34.1	19.5	0.0		1.7	93.9	0.2	4.2	0.0		1.9	2.8	94.6	0.7	0.0		
Total %	0.3	0.1	0.0	0.0	0.0	0.4	0.2	26.7	10.9	0.2	0.0	37.9	0.8	0.0	0.6	0.3	0.0	1.8	0.4	22.2	0.0	1.0	0.0	23.6	0.7	1.0	34.3	0.3	0.0	36.3	
Exiting Leg Total						12						1322						36						277						659	2306

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

5:00 PM	Driveway						Massachusetts Avenue						Appleton Place						Appleton Street						Massachusetts Avenue						Total
	from North						from East						from South						from Southwest						from West						
	Right	Bear Right	Thru	Left	U-Turn	Total	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Thru	Left	U-Turn	Total	
5:00 PM	1	0	0	0	0	1	1	72	38	1	0	112	2	0	2	0	0	4	1	74	0	1	0	76	3	0	86	0	0	89	282
5:15 PM	0	1	0	0	0	1	0	66	20	0	0	86	5	1	0	0	1	7	2	86	0	2	0	90	1	3	106	1	0	111	295
5:30 PM	1	0	0	1	0	2	0	77	20	0	0	97	4	0	4	2	0	10	1	86	0	4	0	91	1	5	105	2	0	113	313
5:45 PM	1	0	0	0	0	1	1	86	31	0	0	118	3	0	2	0	0	5	1	69	0	3	0	73	4	1	104	0	0	109	306
Total Volume	3	1	0	1	0	5	2	301	109	1	0	413	14	1	8	3	0	26	5	315	0	10	0	330	9	9	401	3	0	422	1196
% Approach Total	60.0	20.0	0.0	20.0	0.0		0.5	72.9	26.4	0.2	0.0		53.8	3.8	30.8	11.5	0.0		1.5	95.5	0.0	3.0	0.0		2.1	2.1	95.0	0.7	0.0		
PHF	0.750	0.250	0.000	0.250	0.000	0.625	0.500	0.875	0.717	0.250	0.000	0.875	0.700	0.250	0.500	0.375	0.000	0.650	0.625	0.916	0.000	0.625	0.000	0.907	0.563	0.450	0.946	0.375	0.000	0.934	0.955
Entering Leg	3	1	0	1	0	5	2	301	109	1	0	413	14	1	8	3	0	26	5	315	0	10	0	330	9	9	401	3	0	422	1196
Exiting Leg						6						731						15						122						322	1196
Total						11						1144						41						452						744	2392





PRECISION  
DATA  
INDUSTRIES, LLC

46 Morton Street, Framingham, MA 01702  
Office: 508-875-0100 Fax: 508-875-0118  
Email: [datarequests@pdillc.com](mailto:datarequests@pdillc.com)

	Driveway						Massachusetts Avenue						Appleton Place						Appleton Street						Massachusetts Avenue						Total	
	from North						from East						from South						from Southwest						from West							
	Right	Bear Right	Thru	Left	U-Turn	Total	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Thru	Left	U-Turn	Total		
4:00 PM	0	0	0	0	0	0	0	2	1	0	0	3	0	0	0	0	0	0	0	2	0	0	0	0	2	0	0	3	0	0	3	8
4:15 PM	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	0	1	0	0	0	1	0	0	3	0	0	3	6	
4:30 PM	0	0	0	0	0	0	0	3	0	0	0	3	0	0	0	0	0	0	0	1	0	0	0	1	0	0	1	0	0	1	5	
4:45 PM	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	0	2	0	0	0	2	0	0	3	0	0	3	7	
Total	0	0	0	0	0	0	0	9	1	0	0	10	0	0	0	0	0	0	0	6	0	0	0	6	0	0	10	0	0	10	26	
5:00 PM	0	0	0	0	0	0	0	5	1	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	9	
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	3	
5:30 PM	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	1	0	0	0	1	0	0	3	0	0	3	5		
5:45 PM	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	0	1	0	0	1	0	0	1	0	0	1	4		
Total	0	0	0	0	0	0	0	8	1	0	0	9	0	0	0	0	0	0	0	2	0	0	2	0	0	10	0	0	10	21		
Grand Total	0	0	0	0	0	0	0	17	2	0	0	19	0	0	0	0	0	0	0	8	0	0	8	0	0	20	0	0	20	47		
Approach %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	89.5	10.5	0.0	0.0	89.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36.2	4.3	0.0	0.0	40.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	17.0	0.0	0.0	17.0	0.0	0.0	42.6	0.0	0.0	42.6			
Exiting Leg Total	0						28						0						2						17						47	
Buses	0	0	0	0	0	0	0	13	1	0	0	14	0	0	0	0	0	0	0	2	0	0	2	0	0	17	0	0	17	33		
% Buses	0.0	0.0	0.0	0.0	0.0	0.0	0.0	76.5	50.0	0.0	0.0	73.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25.0	0.0	0.0	25.0	0.0	0.0	85.0	0.0	0.0	85.0	70.2		
Exiting Leg Total	0						19						0						1						13						33	
Single-Unit Trucks	0	0	0	0	0	0	0	3	0	0	0	3	0	0	0	0	0	0	0	5	0	0	5	0	0	2	0	0	2	10		
% Single-Unit	0.0	0.0	0.0	0.0	0.0	0.0	0.0	17.6	0.0	0.0	0.0	15.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	62.5	0.0	0.0	62.5	0.0	0.0	10.0	0.0	0.0	10.0	21.3		
Exiting Leg Total	0						7																									

4:15 PM	Driveway						Massachusetts Avenue						Appleton Place						Appleton Street						Massachusetts Avenue							
	from North						from East						from South						from Southwest						from West							
	Right	Bear Right	Thru	Left	U-Turn	Total	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Thru	Left	U-Turn	Total		Total
4:15 PM	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	3	0	0	3	6
4:30 PM	0	0	0	0	0	0	0	3	0	0	0	3	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	1	0	0	1	5
4:45 PM	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	0	0	2	0	0	0	2	0	0	3	0	0	3	7
5:00 PM	0	0	0	0	0	0	0	5	1	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	9	
Total Volume	0	0	0	0	0	0	0	12	1	0	0	13	0	0	0	0	0	0	0	4	0	0	0	4	0	0	10	0	0	10	27	
% Approach Total	0.0	0.0	0.0	0.0	0.0		0.0	92.3	7.7	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0	0.0		0.0	0.0	100.0	0.0	0.0			
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.600	0.250	0.000	0.000	0.542	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.500	0.000	0.000	0.000	0.500	0.000	0.000	0.833	0.000	0.000	0.833	0.750	
Buses	0	0	0	0	0	0	0	10	0	0	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	0	0	8	18	
Buses %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	83.3	0.0	0.0	0.0	76.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	80.0	0.0	0.0	80.0	66.7	
Single-Unit Trucks	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	3	0	0	0	3	0	0	2	0	0	2	6	
Single-Unit %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.3	0.0	0.0	0.0	7.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	75.0	0.0	0.0	0.0	75.0	0.0	0.0	20.0	0.0	0.0	20.0	22.2	
Articulated Trucks	0	0	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	3	
Articulated %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.3	100.0	0.0	0.0	15.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25.0	0.0	0.0	0.0	25.0	0.0	0.0	0.0	0.0	0.0	0.0	11.1	
Buses	0	0	0	0	0	0	0	10	0	0	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	0	0	8	18	
Single-Unit Trucks	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	3	0	0	0	3	0	0	2	0	0	2	6	
Articulated Trucks	0	0	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	3	
Total Entering Leg	0	0	0	0	0	0	0	12	1	0	0	13	0	0	0	0	0	0	0	4	0	0	0	4	0	0	10	0	0			



PDI File #: **207450 AA**  
 Location: **N: Driveway S: Appleton Place**  
 Location: **E: Massachusetts Avenue W: Massachusetts Avenue SW: Appleton Street**  
 City, State: **Arlington, MA**  
 Client: **Nitsch Eng/B.Zimolka**  
 Site Code: **TBD**  
 Count Date: **Tuesday, February 4, 2020**  
 Start Time: **4:00 PM**  
 End Time: **6:00 PM**  
 Class:



### Buses

	Driveway						Massachusetts Avenue						Appleton Place						Appleton Street						Massachusetts Avenue						Total
	from North						from East						from South						from Southwest						from West						
	Right	Bear Right	Thru	Left	U-Turn	Total	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Thru	Left	U-Turn	Total	
4:00 PM	0	0	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	5
4:15 PM	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	5
4:30 PM	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	3
4:45 PM	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	4
Total	0	0	0	0	0	0	0	7	1	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	0	0	9	17
5:00 PM	0	0	0	0	0	0	0	4	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	6
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	3
5:30 PM	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	1	0	0	2	0	0	2	4
5:45 PM	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	1	0	0	1	0	0	1	3
Total	0	0	0	0	0	0	0	6	0	0	0	6	0	0	0	0	0	0	0	2	0	0	0	2	0	0	8	0	0	8	16
Grand Total	0	0	0	0	0	0	0	13	1	0	0	14	0	0	0	0	0	0	0	2	0	0	0	2	0	0	17	0	0	17	33
Approach %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	92.9	7.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	39.4	3.0	0.0	0.0	42.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.1	0.0	0.0	0.0	6.1	0.0	0.0	51.5	0.0	0.0	51.5	
Exiting Leg Total	0						19						0						1						13						33

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:15 PM	Driveway						Massachusetts Avenue						Appleton Place						Appleton Street						Massachusetts Avenue						Total
	from North						from East						from South						from Southwest						from West						
	Right	Bear Right	Thru	Left	U-Turn	Total	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Thru	Left	U-Turn	Total	
4:15 PM	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	5
4:30 PM	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	3
4:45 PM	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	4	
5:00 PM	0	0	0	0	0	0	0	4	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	6	
Total Volume	0	0	0	0	0	0	0	10	0	0	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	8	0	0	8	18	
% Approach Total	0.0	0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	100.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.625	0.000	0.000	0.000	0.625	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.667	0.000	0.000	0.667	0.750	
Entering Leg	0	0	0	0	0	0	0	10	0	0	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	8	0	0	8	18	
Exiting Leg	0						8						0						0						10						18
Total	0						18						0						0						18						36



PDI File #: **207450 AA**  
 Location: **N: Driveway S: Appleton Place**  
 Location: **E: Massachusetts Avenue W: Massachusetts Avenue SW: Appleton Street**  
 City, State: **Arlington, MA**  
 Client: **Nitsch Eng/B.Zimolka**  
 Site Code: **TBD**  
 Count Date: **Tuesday, February 4, 2020**  
 Start Time: **4:00 PM**  
 End Time: **6:00 PM**  
 Class:



### Single-Unit Trucks

	Driveway						Massachusetts Avenue						Appleton Place						Appleton Street						Massachusetts Avenue						Total	
	from North						from East						from South						from Southwest						from West							
	Right	Bear Right	Thru	Left	U-Turn	Total	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Thru	Left	U-Turn	Total		
4:00 PM	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	2	0	0	0	0	2	0	0	0	0	0	0	3
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	1	
4:30 PM	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2	0	0	1	0	0	1	3
Total	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	0	5	0	0	0	0	5	0	0	1	0	0	1	8
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
5:45 PM	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	2
Grand Total	0	0	0	0	0	0	0	3	0	0	0	3	0	0	0	0	0	0	0	5	0	0	0	0	5	0	0	2	0	0	2	10
Approach %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	30.0	0.0	0.0	0.0	30.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	50.0	0.0	0.0	0.0	50.0	0.0	0.0	20.0	0.0	0.0	20.0		
Exiting Leg Total	0						7						0						0						3						10	

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Driveway						Massachusetts Avenue						Appleton Place						Appleton Street						Massachusetts Avenue							
	from North						from East						from South						from Southwest						from West							
	Right	Bear Right	Thru	Left	U-Turn	Total	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Thru	Left	U-Turn	Total		Total
4:00 PM	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	2	0	0	0	0	2	0	0	0	0	0	0	3
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	1
4:30 PM	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2	0	0	1	0	0	1	3
Total Volume	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	5	0	0	1	0	0	5	0	0	1	0	0	1	8
% Approach Total	0.0	0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0	0.0		0.0	0.0	100.0	0.0	0.0			
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.500	0.000	0.000	0.000	0.500	0.000	0.000	0.000	0.000	0.000		0.000	0.625	0.000	0.000	0.000	0.625	0.000	0.000	0.250	0.000	0.000	0.250	0.667	
Entering Leg	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	5	0	0	0	0	5	0	0	1	0	0	1	8	
Exiting Leg	0						6						0						0						2						8	
Total	0						8						0						5						3						16	



PDI File #: **207450 AA**  
 Location: **N: Driveway S: Appleton Place**  
 Location: **E: Massachusetts Avenue W: Massachusetts Avenue SW: Appleton Street**  
 City, State: **Arlington, MA**  
 Client: **Nitsch Eng/B.Zimolka**  
 Site Code: **TBD**  
 Count Date: **Tuesday, February 4, 2020**  
 Start Time: **4:00 PM**  
 End Time: **6:00 PM**  
 Class:



### Articulated Trucks

	Driveway						Massachusetts Avenue						Appleton Place						Appleton Street						Massachusetts Avenue						Total	
	from North						from East						from South						from Southwest						from West							
	Right	Bear Right	Thru	Left	U-Turn	Total	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Thru	Left	U-Turn	Total		
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	1	
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	1
5:00 PM	0	0	0	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	0	0	0	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	3
Grand Total	0	0	0	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	0	0	1	0	0	0	1	0	0	1	0	0	1	4
Approach %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	50.0	50.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25.0	25.0	0.0	0.0	50.0	0.0	0.0	0.0	0.0	0.0	0.0	25.0	0.0	0.0	0.0	25.0	0.0	0.0	25.0	0.0	0.0	0.0	25.0	
Exiting Leg Total	0						2						0						1						1						4	

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:15 PM	Driveway						Massachusetts Avenue						Appleton Place						Appleton Street						Massachusetts Avenue						Total	
	from North						from East						from South						from Southwest						from West							
	Right	Bear Right	Thru	Left	U-Turn	Total	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Thru	Left	U-Turn	Total		
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	1
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
5:00 PM	0	0	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	
Total Volume	0	0	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	3	
% Approach Total	0.0	0.0	0.0	0.0	0.0		0.0	50.0	50.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0			
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.250	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000		0.000	0.250	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.375	
Entering Leg	0	0	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	3	
Exiting Leg	0						1						0						1						1						3	
Total	0						3						0						2						1						6	



PDI File #: **207450 AA**  
 Location: **N: Driveway S: Appleton Place**  
 Location: **E: Massachusetts Avenue W: Massachusetts Avenue SW: Appleton Street**  
 City, State: **Arlington, MA**  
 Client: **Nitsch Eng/B.Zimolka**  
 Site Code: **TBD**  
 Count Date: **Tuesday, February 4, 2020**  
 Start Time: **4:00 PM**  
 End Time: **6:00 PM**  
 Class:



### Bicycles (on Roadway and Crosswalks)

	Driveway								Massachusetts Avenue								Appleton Place								Appleton Street								Massachusetts Avenue								Total
	from North								from East								from South								from Southwest								from West								
	Right	Bear Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Bear Left	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	Hard Left	U-Turn	CW-WB	CW-EB	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	CW-NWB	CW-SEB	Total	Hard Right	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	2
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	
Total	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2	3
5:00 PM	0	0	0	0	0	1	1	2	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
5:30 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:45 PM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Total	0	0	0	0	0	1	1	2	0	4	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
Grand Total	0	0	0	0	0	1	1	2	0	5	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2	9
Approach %	0.0	0.0	0.0	0.0	0.0	50.0	50.0		0.0	100.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	100.0	0.0	0.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	11.1	11.1	22.2	0.0	55.6	0.0	0.0	0.0	0.0	0.0	55.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	22.2	0.0	0.0	0.0	0.0	22.2		
Exiting Leg Total	2								2								0								0								5								9

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:15 PM	Driveway								Massachusetts Avenue								Appleton Place								Appleton Street								Massachusetts Avenue								Total
	from North								from East								from South								from Southwest								from West								
	Right	Bear Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Bear Left	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	Hard Left	U-Turn	CW-WB	CW-EB	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	CW-NWB	CW-SEB	Total	Hard Right	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	2
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	
5:00 PM	0	0	0	0	0	1	1	2	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Total Volume	0	0	0	0	0	1	1	2	0	2	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	6	
% Approach Total	0.0	0.0	0.0	0.0	0.0	50.0	50.0		0.0	100.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	100.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.250	0.250	0.250	0.000	0.500	0.000	0.000	0.000	0.000	0.000	0.500	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.500	0.000	0.000	0.000	0.000	0.500	0.500		
Entering Leg	0	0	0	0	0	1	1	2	0	2	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	6		
Exiting Leg	2								2								0								0								2								6
Total	4								4								0								0								4								12



PDI File #: **207450 AA**  
 Location: **N: Driveway S: Appleton Place**  
 Location: **E: Massachusetts Avenue W: Massachusetts Avenue SW: Appleton Street**  
 City, State: **Arlington, MA**  
 Client: **Nitsch Eng/B.Zimolka**  
 Site Code: **TBD**  
 Count Date: **Tuesday, February 4, 2020**  
 Start Time: **4:00 PM**  
 End Time: **6:00 PM**  
 Class:



### Pedestrians

	Driveway								Massachusetts Avenue								Appleton Place								Appleton Street								Massachusetts Avenue								Total	
	from North								from East								from South								from Southwest								from West									
	Right	Bear Right	Thru	Left	U-Turn	CW-SB	CW-WB	Total	Right	Thru	Bear Left	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	Hard Left	U-Turn	CW-WB	CW-EB	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	CW-NWB	CW-SEB	Total	Hard Right	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total		
4:00 PM	0	0	0	0	0	3	1	4	0	0	0	0	0	1	0	1	0	0	0	0	0	1	2	3	0	0	0	0	0	4	2	6	0	0	0	0	0	0	0	0	0	14
4:15 PM	0	0	0	0	0	3	2	5	0	0	0	0	0	4	1	5	0	0	0	0	0	2	1	3	0	0	0	0	0	3	1	4	0	0	0	0	0	0	0	0	0	17
4:30 PM	0	0	0	0	0	0	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	5		
4:45 PM	0	0	0	0	0	6	2	8	0	0	0	0	0	1	0	1	0	0	0	0	0	2	0	2	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	12	
Total	0	0	0	0	0	12	8	20	0	0	0	0	0	6	1	7	0	0	0	0	0	6	3	9	0	0	0	0	0	8	3	11	0	0	0	0	0	0	1	1	48	
5:00 PM	0	0	0	0	0	3	0	3	0	0	0	0	0	2	2	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7		
5:15 PM	0	0	0	0	0	3	3	6	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	2	0	2	0	0	0	0	0	0	1	1	10		
5:30 PM	0	0	0	0	0	3	1	4	0	0	0	0	0	1	0	1	0	0	0	0	0	1	2	3	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	10	
5:45 PM	0	0	0	0	0	0	3	3	0	0	0	0	0	1	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5		
Total	0	0	0	0	0	9	7	16	0	0	0	0	0	4	3	7	0	0	0	0	0	2	2	4	0	0	0	0	0	2	2	4	0	0	0	0	0	0	1	1	32	
Grand Total	0	0	0	0	0	21	15	36	0	0	0	0	0	10	4	14	0	0	0	0	0	8	5	13	0	0	0	0	0	10	5	15	0	0	0	0	0	2	2	80		
Approach %	0	0	0	0	0	58.3	41.7		0	0	0	0	0	71.4	28.6		0	0	0	0	0	61.5	38.5		0	0	0	0	0	66.7	33.3		0	0	0	0	0	0	100			
Total %	0	0	0	0	0	26.3	18.8	45	0	0	0	0	0	12.5	5	17.5	0	0	0	0	0	10	6.25	16.3	0	0	0	0	0	12.5	6.25	18.8	0	0	0	0	0	2.5	2.5			
Exiting Leg Total	36								14								13								15								2								80	

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Driveway								Massachusetts Avenue								Appleton Place								Appleton Street								Massachusetts Avenue								Total
	from North								from East								from South								from Southwest								from West								
	Right	Bear Right	Thru	Left	U-Turn	CW-SB	CW-WB	Total	Right	Thru	Bear Left	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	Hard Left	U-Turn	CW-WB	CW-EB	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	CW-WNB	CW-SEB	Total	Hard Right	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	
4:00 PM	0	0	0	0	0	3	1	4	0	0	0	0	0	1	0	1	0	0	0	0	0	1	2	3	0	0	0	0	0	4	2	6	0	0	0	0	0	0	0	0	14
4:15 PM	0	0	0	0	0	3	2	5	0	0	0	0	0	4	1	5	0	0	0	0	0	2	1	3	0	0	0	0	0	3	1	4	0	0	0	0	0	0	0	0	17
4:30 PM	0	0	0	0	0	0	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	5		
4:45 PM	0	0	0	0	0	6	2	8	0	0	0	0	0	1	0	1	0	0	0	0	0	2	0	2	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	12	
Total Volume	0	0	0	0	0	12	8	20	0	0	0	0	0	6	1	7	0	0	0	0	0	6	3	9	0	0	0	0	0	8	3	11	0	0	0	0	0	0	1	1	48
% Approach Total	0.0	0.0	0.0	0.0	0.0	60.0	40.0		0.0	0.0	0.0	0.0	0.0	85.7	14.3		0.0	0.0	0.0	0.0	0.0	66.7	33.3		0.0	0.0	0.0	0.0	0.0	72.7	27.3		0.0	0.0	0.0	0.0	0.0	0.0	100.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.500	0.667	0.625	0.000	0.000	0.000	0.000	0.000	0.375	0.250	0.350	0.000	0.000	0.000	0.000	0.000	0.750	0.375	0.750	0.000	0.000	0.000	0.000	0.000	0.500	0.375	0.458	0.000	0.000	0.000	0.000	0.000	0.250	0.250	0.706	
Entering Leg	0	0	0	0	0	12	8	20	0	0	0	0	0	6	1	7	0	0	0	0	0	6	3	9	0	0	0	0	0	8	3	11	0	0	0	0	0	0	1	1	48
Exiting Leg	20								7								9								11								1								48
Total	40								14								18								22								2								96



PDI File #: 207450 BBCC  
 Location: N: Forest Street S: Burton Street NE: Mirak Mill Park West Driveway  
 Location: E: Massachusetts Avenue W: Massachusetts Avenue  
 City, State: Arlington, MA  
 Client: Nitsch Eng/B.Zimolka  
 Site Code: TBD  
 Count Date: Tuesday, February 4, 2020  
 Start Time: 4:00 PM  
 End Time: 6:00 PM  
 Class:



### Cars and Heavy Vehicles (Combined)

	Forest Street						Mirak Mill Park West Driveway						Massachusetts Avenue						Burton Street						Massachusetts Avenue						Total
	from North						from Northeast						from East						from South						from West						
	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Thru	Left	U-Turn	Total	Right	Bear Right	Thru	Left	U-Turn	Total	Right	Thru	Bear Left	Left	U-Turn	Total	
4:00 PM	26	1	5	0	0	32	1	3	0	0	0	4	1	22	95	2	0	120	1	0	0	0	0	1	0	122	1	23	0	146	303
4:15 PM	16	2	6	0	0	24	1	1	0	1	0	3	0	16	82	0	0	98	2	0	1	0	0	3	1	113	0	43	0	157	285
4:30 PM	18	0	15	0	0	33	2	5	0	0	0	7	2	13	96	0	0	111	0	0	0	0	0	0	1	115	1	34	0	151	302
4:45 PM	27	0	6	0	0	33	1	4	0	3	0	8	1	18	94	0	0	113	0	0	0	0	0	0	0	132	1	21	0	154	308
Total	87	3	32	0	0	122	5	13	0	4	0	22	4	69	367	2	0	442	3	0	1	0	0	4	2	482	3	121	0	608	1198
5:00 PM	18	0	11	0	0	29	3	4	0	2	0	9	1	24	96	0	0	121	0	0	1	0	0	1	0	116	3	50	0	169	329
5:15 PM	15	1	8	0	0	24	0	1	0	1	0	2	1	23	72	0	0	96	2	0	0	1	0	3	1	139	1	55	0	196	321
5:30 PM	13	0	8	0	0	21	0	4	0	3	0	7	0	17	82	0	0	99	2	0	1	0	0	3	1	148	1	49	1	200	330
5:45 PM	19	3	11	0	0	33	2	3	0	0	0	5	0	20	102	3	0	125	4	0	1	0	0	5	0	137	1	40	0	178	346
Total	65	4	38	0	0	107	5	12	0	6	0	23	2	84	352	3	0	441	8	0	3	1	0	12	2	540	6	194	1	743	1326
Grand Total	152	7	70	0	0	229	10	25	0	10	0	45	6	153	719	5	0	883	11	0	4	1	0	16	4	1022	9	315	1	1351	2524
Approach %	66.4	3.1	30.6	0.0	0.0		22.2	55.6	0.0	22.2	0.0		0.7	17.3	81.4	0.6	0.0		68.8	0.0	25.0	6.3	0.0		0.3	75.6	0.7	23.3	0.1		
Total %	6.0	0.3	2.8	0.0	0.0	9.1	0.4	1.0	0.0	0.4	0.0	1.8	0.2	6.1	28.5	0.2	0.0	35.0	0.4	0.0	0.2	0.0	0.0	0.6	0.2	40.5	0.4	12.5	0.0	53.5	
Exiting Leg Total	482						15						1113						16						898						2524
Cars	152	7	70	0	0	229	10	25	0	9	0	44	6	150	698	5	0	859	11	0	4	1	0	16	4	999	9	312	1	1325	2473
% Cars	100.0	100.0	100.0	0.0	0.0	100.0	100.0	100.0	0.0	90.0	0.0	97.8	100.0	98.0	97.1	100.0	0.0	97.3	100.0	0.0	100.0	100.0	0.0	100.0	100.0	97.7	100.0	99.0	100.0	98.1	98.0
Exiting Leg Total	476						15						1089						16						877						2473
Heavy Vehicles	0	0	0	0	0	0	0	0	0	1	0	1	0	3	21	0	0	24	0	0	0	0	0	0	0	23	0	3	0	26	51
% Heavy Vehicles	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.0	0.0	2.2	0.0	2.0	2.9	0.0	0.0	2.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3	0.0	1.0	0.0	1.9	2.0
Exiting Leg Total	6						0						24						0						21						51

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

5:00 PM	Forest Street						Mirak Mill Park West Driveway						Massachusetts Avenue						Burton Street						Massachusetts Avenue						
	from North						from Northeast						from East						from South						from West						
	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Thru	Left	U-Turn	Total	Right	Bear Right	Thru	Left	U-Turn	Total	Right	Thru	Bear Left	Left	U-Turn	Total	
5:00 PM	18	0	11	0	0	29	3	4	0	2	0	9	1	24	96	0	0	121	0	0	1	0	0	1	0	116	3	50	0	169	329
5:15 PM	15	1	8	0	0	24	0	1	0	1	0	2	1	23	72	0	0	96	2	0	0	1	0	3	1	139	1	55	0	196	321
5:30 PM	13	0	8	0	0	21	0	4	0	3	0	7	0	17	82	0	0	99	2	0	1	0	0	3	1	148	1	49	1	200	330
5:45 PM	19	3	11	0	0	33	2	3	0	0	0	5	0	20	102	3	0	125	4	0	1	0	0	5	0	137	1	40	0	178	346
Total Volume	65	4	38	0	0	107	5	12	0	6	0	23	2	84	352	3	0	441	8	0	3	1	0	12	2	540	6	194	1	743	1326
% Approach Total	60.7	3.7	35.5	0.0	0.0		21.7	52.2	0.0	26.1	0.0		0.5	19.0	79.8	0.7	0.0		66.7	0.0	25.0	8.3	0.0		0.3	72.7	0.8	26.1	0.1		
PHF	0.855	0.333	0.864	0.000	0.000	0.811	0.417	0.750	0.000	0.500	0.000	0.639	0.500	0.875	0.863	0.250	0.000	0.882	0.500	0.000	0.750	0.250	0.000	0.600	0.500	0.912	0.500	0.882	0.250	0.929	0.958
Cars	65	4	38	0	0	107	5	12	0	5	0	22	2	82	340	3	0	427	8	0	3	1	0	12	2	530	6	193	1	732	1300
Cars %	100.0	100.0	100.0	0.0	0.0	100.0	100.0	100.0	0.0	83.3	0.0	95.7	100.0	97.6	96.6	100.0	0.0	96.8	100.0	0.0	100.0	100.0	0.0	100.0	100.0	98.1	100.0	99.5	100.0	98.5	98.0
Heavy Vehicles	0	0	0	0	0	0	0	0	0	1	0	1	0	2	12	0	0	14	0	0	0	0	0	0	0	10	0	1	0	11	26
Heavy Vehicles %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	16.7	0.0	4.3	0.0	2.4	3.4	0.0	0.0	3.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	0.0	0.5	0.0	1.5	2.0
Cars Enter Leg	65	4	38	0	0	107	5	12	0	5	0	22	2	82	340	3	0	427	8	0	3	1	0	12	2	530	6	193	1	732	1300
Heavy Enter Leg	0	0	0	0	0	0	0	0	0	1	0	1	0	2	12	0	0	14	0	0	0	0	0	0	0	10	0	1	0	11	26
Total Entering Leg	65	4	38	0	0	107	5	12	0	6	0	23	2	84	352	3	0	441	8	0	3	1	0	12	2	540	6	194	1	743	1326
Cars Exiting Leg	283						8						581						9						419						1300
Heavy Exiting Leg	3						0						11						0						12						26
Total Exiting Leg	286						8						592						9						431						1326



PDI File #: **207450 BBCC**  
 Location: **N: Forest Street S: Burton Street NE: Mirak Mill Park West Driveway**  
 Location: **E: Massachusetts Avenue W: Massachusetts Avenue**  
 City, State: **Arlington, MA**  
 Client: **Nitsch Eng/B.Zimolka**  
 Site Code: **TBD**  
 Count Date: **Tuesday, February 4, 2020**  
 Start Time: **4:00 PM**  
 End Time: **6:00 PM**  
 Class:



**Cars**

	Forest Street						Mirak Mill Park West Driveway						Massachusetts Avenue						Burton Street						Massachusetts Avenue						
	from North						from Northeast						from East						from South						from West						
	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Thru	Left	U-Turn	Total	Right	Bear Right	Thru	Left	U-Turn	Total	Right	Thru	Bear Left	Left	U-Turn	Total	
4:00 PM	26	1	5	0	0	32	1	3	0	0	0	4	1	21	93	2	0	117	1	0	0	0	0	1	0	118	1	23	0	142	296
4:15 PM	16	2	6	0	0	24	1	1	0	1	0	3	0	16	80	0	0	96	2	0	1	0	0	3	1	110	0	42	0	153	279
4:30 PM	18	0	15	0	0	33	2	5	0	0	0	7	2	13	93	0	0	108	0	0	0	0	0	0	1	113	1	34	0	149	297
4:45 PM	27	0	6	0	0	33	1	4	0	3	0	8	1	18	92	0	0	111	0	0	0	0	0	0	0	128	1	20	0	149	301
Total	87	3	32	0	0	122	5	13	0	4	0	22	4	68	358	2	0	432	3	0	1	0	0	4	2	469	3	119	0	593	1173
5:00 PM	18	0	11	0	0	29	3	4	0	2	0	9	1	22	90	0	0	113	0	0	1	0	0	1	0	113	3	50	0	166	318
5:15 PM	15	1	8	0	0	24	0	1	0	1	0	2	1	23	71	0	0	95	2	0	0	1	0	3	1	136	1	55	0	193	317
5:30 PM	13	0	8	0	0	21	0	4	0	2	0	6	0	17	81	0	0	98	2	0	1	0	0	3	1	146	1	48	1	197	325
5:45 PM	19	3	11	0	0	33	2	3	0	0	0	5	0	20	98	3	0	121	4	0	1	0	0	5	0	135	1	40	0	176	340
Total	65	4	38	0	0	107	5	12	0	5	0	22	2	82	340	3	0	427	8	0	3	1	0	12	2	530	6	193	1	732	1300
Grand Total	152	7	70	0	0	229	10	25	0	9	0	44	6	150	698	5	0	859	11	0	4	1	0	16	4	999	9	312	1	1325	2473
Approach %	66.4	3.1	30.6	0.0	0.0		22.7	56.8	0.0	20.5	0.0		0.7	17.5	81.3	0.6	0.0		68.8	0.0	25.0	6.3	0.0		0.3	75.4	0.7	23.5	0.1		
Total %	6.1	0.3	2.8	0.0	0.0	9.3	0.4	1.0	0.0	0.4	0.0	1.8	0.2	6.1	28.2	0.2	0.0	34.7	0.4	0.0	0.2	0.0	0.0	0.6	0.2	40.4	0.4	12.6	0.0	53.6	
Exiting Leg Total	476						15						1089						16						877						2473

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

5:00 PM	Forest Street						Mirak Mill Park West Driveway						Massachusetts Avenue						Burton Street						Massachusetts Avenue						Total
	from North						from Northeast						from East						from South						from West						
	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Thru	Left	U-Turn	Total	Right	Bear Right	Thru	Left	U-Turn	Total	Right	Thru	Bear Left	Left	U-Turn	Total	
5:00 PM	18	0	11	0	0	29	3	4	0	2	0	9	1	22	90	0	0	113	0	0	1	0	0	1	0	113	3	50	0	166	318
5:15 PM	15	1	8	0	0	24	0	1	0	1	0	2	1	23	71	0	0	95	2	0	0	1	0	3	1	136	1	55	0	193	317
5:30 PM	13	0	8	0	0	21	0	4	0	2	0	6	0	17	81	0	0	98	2	0	1	0	0	3	1	146	1	48	1	197	325
5:45 PM	19	3	11	0	0	33	2	3	0	0	0	5	0	20	98	3	0	121	4	0	1	0	0	5	0	135	1	40	0	176	340
Total Volume	65	4	38	0	0	107	5	12	0	5	0	22	2	82	340	3	0	427	8	0	3	1	0	12	2	530	6	193	1	732	1300
% Approach Total	60.7	3.7	35.5	0.0	0.0		22.7	54.5	0.0	22.7	0.0		0.5	19.2	79.6	0.7	0.0		66.7	0.0	25.0	8.3	0.0		0.3	72.4	0.8	26.4	0.1		
PHF	0.855	0.333	0.864	0.000	0.000	0.811	0.417	0.750	0.000	0.625	0.000	0.611	0.500	0.891	0.867	0.250	0.000	0.882	0.500	0.000	0.750	0.250	0.000	0.600	0.500	0.908	0.500	0.877	0.250	0.929	0.956
Entering Leg	65	4	38	0	0	107	5	12	0	5	0	22	2	82	340	3	0	427	8	0	3	1	0	12	2	530	6	193	1	732	1300
Exiting Leg	283						8						581						9						419						1300
Total	390						30						1008						21						1151						2600



PDI File #: 207450 BBCC  
 Location: N: Forest Street S: Burton Street NE: Mirak Mill Park West Driveway  
 Location: E: Massachusetts Avenue W: Massachusetts Avenue  
 City, State: Arlington, MA  
 Client: Nitsch Eng/B.Zimolka  
 Site Code: TBD  
 Count Date: Tuesday, February 4, 2020  
 Start Time: 4:00 PM  
 End Time: 6:00 PM  
 Class:



### Heavy Vehicles-Combined (Buses, Single-Unit Trucks, Articulated Trucks)

	Forest Street						Mirak Mill Park West Driveway						Massachusetts Avenue						Burton Street						Massachusetts Avenue						Total	
	from North						from Northeast						from East						from South						from West							
	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Thru	Left	U-Turn	Total	Right	Bear Right	Thru	Left	U-Turn	Total	Right	Thru	Bear Left	Left	U-Turn	Total		
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0	0	3	0	0	0	0	0	0	0	0	4	0	0	0	4	7
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	3	0	1	0	4	6	
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	0	2	0	0	0	2	5	
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	4	0	1	0	5	7	
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	1	9	0	0	10	0	0	0	0	0	0	0	13	0	2	0	15	25	
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	6	0	0	8	0	0	0	0	0	0	0	3	0	0	0	3	11	
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	3	0	0	0	3	4	
5:30 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	1	0	0	1	0	0	0	0	0	0	0	2	0	1	0	3	5	
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	0	2	0	0	0	2	6	
Total	0	0	0	0	0	0	0	0	0	1	0	1	0	2	12	0	0	14	0	0	0	0	0	0	0	10	0	1	0	11	26	
Grand Total	0	0	0	0	0	0	0	0	0	1	0	1	0	3	21	0	0	24	0	0	0	0	0	0	0	23	0	3	0	26	51	
Approach %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	12.5	87.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	88.5	0.0	11.5	0.0	0.0	0.0	
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	2.0	0.0	5.9	41.2	0.0	0.0	47.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	45.1	0.0	5.9	0.0	51.0	0.0	
Exiting Leg Total	6						0						24						0						21						51	
Buses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16	0	0	16	0	0	0	0	0	0	0	18	0	0	0	18	34	
% Buses	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	76.2	0.0	0.0	66.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	78.3	0.0	0.0	0.0	69.2	66.7	
Exiting Leg Total	0						0						18						0						16						34	
Single-Unit Trucks	0	0	0	0	0	0	0	0	0	1	0	1	0	3	4	0	0	7	0	0	0	0	0	0	0	4	0	3	0	7	15	
% Single-Unit	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	100.0	0.0	100.0	19.0	0.0	0.0	29.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	17.4	0.0	100.0	0.0	26.9	29.4	
Exiting Leg Total	6						0						5						0						4						15	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	1	0	0	0	1	2	
% Articulated	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.8	0.0	0.0	4.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.3	0.0	0.0	0.0	3.8	3.9	
Exiting Leg Total	0						0						1						0						1						2	

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:15 PM	Forest Street						Mirak Mill Park West Driveway						Massachusetts Avenue						Burton Street						Massachusetts Avenue						Total	
	from North						from Northeast						from East						from South						from West							
	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Thru	Left	U-Turn	Total	Right	Bear Right	Thru	Left	U-Turn	Total	Right	Thru	Bear Left	Left	U-Turn	Total		
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	3	0	1	0	4	6
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	0	2	0	0	0	2	5	
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	4	0	1	0	5	7	
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	6	0	0	8	0	0	0	0	0	0	0	3	0	0	0	3	11	
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	2	13	0	0	15	0	0	0	0	0	0	0	12	0	2	0	14	29	
% Approach Total	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	13.3	86.7	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	85.7	0.0	14.3	0.0			
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.542	0.000	0.000	0.469	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.750	0.000	0.500	0.000	0.700	0.659	
Buses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	0	0	10	0	0	0	0	0	0	0	8	0	0	0	8	18	
Buses %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	76.9	0.0	0.0	66.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	66.7	0.0	0.0	0.0	57.1	62.1	
Single-Unit Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	4	0	0	0	0	0	0	0	3	0	2	0	5	9	
Single-Unit %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	15.4	0.0	0.0	26.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25.0	0.0	100.0	0.0	35.7	31.0	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	1	0	0	0	1	2	
Articulated %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.7	0.0	0.0	6.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.3	0.0	0.0	0.0	7.1	6.9	
Buses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	0	0	10	0	0	0	0	0	0	0	8	0	0	0	8	18	
Single-Unit Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	4	0	0	0	0	0	0	0	3	0	2	0	5	9	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	1	0	0	0	1	2	
Total Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	2	13	0	0	15	0	0	0	0	0	0	0	12	0	2	0	14	29	
Buses	0						0						8						0						10						18	
Single-Unit Trucks	4						0						3						0						2						9	
Articulated Trucks	0						0						1						0						1						2	
Total Exiting Leg	4						0						12						0						13						29	



PDI File #: 207450 BBCC  
 Location: N: Forest Street S: Burton Street NE: Mirak Mill Park West Driveway  
 Location: E: Massachusetts Avenue W: Massachusetts Avenue  
 City, State: Arlington, MA  
 Client: Nitsch Eng/B.Zimolka  
 Site Code: TBD  
 Count Date: Tuesday, February 4, 2020  
 Start Time: 4:00 PM  
 End Time: 6:00 PM  
 Class:



### Buses

	Forest Street						Mirak Mill Park West Driveway						Massachusetts Avenue						Burton Street						Massachusetts Avenue						Total
	from North						from Northeast						from East						from South						from West						
	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Thru	Left	U-Turn	Total	Right	Bear Right	Thru	Left	U-Turn	Total	Right	Thru	Bear Left	Left	U-Turn	Total	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	3	0	0	0	3	5
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	3	0	0	0	3	5	
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	1	0	0	0	1	3	
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	2	0	0	0	2	4	
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	0	0	8	0	0	0	0	0	0	9	0	0	0	9	17	
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	2	0	0	0	2	6	
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	3	0	0	0	3	4	
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	2	0	0	0	2	3	
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	2	0	0	0	2	4	
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	0	0	8	0	0	0	0	0	0	9	0	0	0	9	17	
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16	0	0	16	0	0	0	0	0	0	18	0	0	0	18	34	
Approach %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	47.1	0.0	0.0	47.1	0.0	0.0	0.0	0.0	0.0	0.0	52.9	0.0	0.0	0.0	52.9		
Exiting Leg Total	0						0						18						0						16						34

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:15 PM	Forest Street						Mirak Mill Park West Driveway						Massachusetts Avenue						Burton Street						Massachusetts Avenue						Total
	from North						from Northeast						from East						from South						from West						
	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Thru	Left	U-Turn	Total	Right	Bear Right	Thru	Left	U-Turn	Total	Right	Thru	Bear Left	Left	U-Turn	Total	
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	3	0	0	0	3	5
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	1	0	0	0	1	3
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	2	0	0	0	2	4
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	0	2	0	0	0	2	6
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	0	0	10	0	0	0	0	0	0	0	8	0	0	0	8	18
% Approach Total	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.625	0.000	0.000	0.625	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.667	0.000	0.000	0.000	0.667	0.750
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	0	0	10	0	0	0	0	0	0	0	8	0	0	0	8	18
Exiting Leg	0						0						8						0						10						18
Total	0						0						18						0						18						36



PDI File #: **207450 BBCC**  
 Location: **N: Forest Street S: Burton Street NE: Mirak Mill Park West Driveway**  
 Location: **E: Massachusetts Avenue W: Massachusetts Avenue**  
 City, State: **Arlington, MA**  
 Client: **Nitsch Eng/B.Zimolka**  
 Site Code: **TBD**  
 Count Date: **Tuesday, February 4, 2020**  
 Start Time: **4:00 PM**  
 End Time: **6:00 PM**  
 Class:



### Single-Unit Trucks

	Forest Street						Mirak Mill Park West Driveway						Massachusetts Avenue						Burton Street						Massachusetts Avenue						Total	
	from North						from Northeast						from East						from South						from West							
	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Thru	Left	U-Turn	Total	Right	Bear Right	Thru	Left	U-Turn	Total	Right	Thru	Bear Left	Left	U-Turn	Total		
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	1	2
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	1	0	3	3	
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	0	0	3	0	2	0	5	7	
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0	0	3	0	0	0	0	0	0	0	1	0	0	0	1	4	
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
5:30 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	2	
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2	
Total	0	0	0	0	0	0	0	0	0	1	0	1	0	2	3	0	0	5	0	0	0	0	0	0	0	0	1	0	1	0	2	8
Grand Total	0	0	0	0	0	0	0	0	0	1	0	1	0	3	4	0	0	7	0	0	0	0	0	0	0	0	4	0	3	0	7	15
Approach %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	42.9	57.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	57.1	0.0	42.9	0.0	0.0	0.0	
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.7	0.0	6.7	0.0	20.0	26.7	0.0	0.0	46.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	26.7	0.0	20.0	0.0	46.7	0.0	
Exiting Leg Total	6						0						5						0						4						15	

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:15 PM	Forest Street						Mirak Mill Park West Driveway						Massachusetts Avenue						Burton Street						Massachusetts Avenue						Total	
	from North						from Northeast						from East						from South						from West							
	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Thru	Left	U-Turn	Total	Right	Bear Right	Thru	Left	U-Turn	Total	Right	Thru	Bear Left	Left	U-Turn	Total		
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	1	0	3	3	
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0	0	3	0	0	0	0	0	0	0	0	1	0	0	1	4	
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	4	0	0	0	0	0	0	0	0	3	0	2	0	5	9
% Approach Total	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	50.0	50.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	60.0	0.0	40.0	0.0	0.0	0.0	
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.500	0.000	0.000	0.333	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.375	0.000	0.500	0.000	0.417	0.563	
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	4	0	0	0	0	0	0	0	0	3	0	2	0	5	9
Exiting Leg	4						0						3						0						2						9	
Total	4						0						7						0						7						18	



PDI File #: **207450 BBCC**  
 Location: **N: Forest Street S: Burton Street NE: Mirak Mill Park West Driveway**  
 Location: **E: Massachusetts Avenue W: Massachusetts Avenue**  
 City, State: **Arlington, MA**  
 Client: **Nitsch Eng/B.Zimolka**  
 Site Code: **TBD**  
 Count Date: **Tuesday, February 4, 2020**  
 Start Time: **4:00 PM**  
 End Time: **6:00 PM**  
 Class:



### Articulated Trucks

	Forest Street						Mirak Mill Park West Driveway						Massachusetts Avenue						Burton Street						Massachusetts Avenue						Total
	from North						from Northeast						from East						from South						from West						
	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Thru	Left	U-Turn	Total	Right	Bear Right	Thru	Left	U-Turn	Total	Right	Thru	Bear Left	Left	U-Turn	Total	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	1	0	0	0	1	
Approach %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	50.0	0.0	0.0	50.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	50.0	0.0	0.0	0.0	50.0	
Exiting Leg Total	0						0						1						0						1						

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:15 PM	Forest Street						Mirak Mill Park West Driveway						Massachusetts Avenue						Burton Street						Massachusetts Avenue						Total
	from North						from Northeast						from East						from South						from West						
	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Thru	Left	U-Turn	Total	Right	Bear Right	Thru	Left	U-Turn	Total	Right	Thru	Bear Left	Left	U-Turn	Total	
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	1	0	0	0	1	2
% Approach Total	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.250	0.500
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	1	0	0	0	1	2
Exiting Leg	0						0						1						0						0						1
Total	0						0						2						0						2						4



PDI File #: **207450 BBCC**  
 Location: **N: Forest Street S: Burton Street NE: Mirak Mill Park West Driveway**  
 Location: **E: Massachusetts Avenue W: Massachusetts Avenue**  
 City, State: **Arlington, MA**  
 Client: **Nitsch Eng/B.Zimolka**  
 Site Code: **TBD**  
 Count Date: **Tuesday, February 4, 2020**  
 Start Time: **4:00 PM**  
 End Time: **6:00 PM**  
 Class:



### Bicycles (on Roadway and Crosswalks)

	Forest Street								Mirak Mill Park West Driveway								Massachusetts Avenue								Burton Street								Massachusetts Avenue								Total	
	from North								from Northeast								from East								from South								from West									
	Right	Thru	Left	Hard Left	U-Turn	CW-EB	CW-WB	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	CW-SEB	CW-NWB	Total	Hard Right	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Bear Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Bear Left	Left	U-Turn	CW-NB	CW-SB	Total		
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	2	
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1	
Total	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	2	4
5:00 PM	1	1	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2	0	0	0	0	0	0	0	0	1	0	0	0	0	1	2	6	
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	1	1	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2	0	0	0	0	0	0	0	0	1	0	0	0	0	1	2	6	
Grand Total	1	1	0	0	0	0	0	0	2	0	0	0	1	0	0	0	1	0	0	3	0	0	0	0	3	0	0	0	0	0	0	0	0	1	2	0	0	0	0	1	4	10
Approach %	50.0	50.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	100.0	0.0	0.0	0.0		0.0	0.0	100.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0		25.0	50.0	0.0	0.0	0.0	0.0	25.0		
Total %	10.0	10.0	0.0	0.0	0.0	0.0	0.0	0.0	20.0	0.0	0.0	0.0	10.0	0.0	0.0	0.0	10.0	0.0	0.0	30.0	0.0	0.0	0.0	0.0	30.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.0	20.0	0.0	0.0	0.0	0.0	10.0	40.0	
Exiting Leg Total	0								0								3								2								5								10	

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:15 PM	Forest Street							Mirak Mill Park West Driveway							Massachusetts Avenue							Burton Street							Massachusetts Avenue							Total						
	from North							from Northeast							from East							from South							from West													
	Right	Thru	Left	Hard Left	U-Turn	CW-EB	CW-WB	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	CW-SEB	CW-NWB	Total	Hard Right	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Bear Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Bear Left		Left	U-Turn	CW-NB	CW-SB	Total	
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	2	
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1	
5:00 PM	1	1	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	2	6
Total Volume	1	1	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	3	0	0	0	0	0	0	0	0	1	2	0	0	0	0	1	4	9	
% Approach Total	50.0	50.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	100.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0		25.0	50.0	0.0	0.0	0.0	0.0	25.0				
PHF	0.250	0.250	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.375	0.000	0.000	0.000	0.000	0.375	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.500	0.000	0.000	0.000	0.250	0.500	0.375		
Entering Leg	1	1	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	3	0	0	0	0	0	0	0	0	1	2	0	0	0	0	1	4	9	
Exiting Leg	0							0							2							2							5							9						
Total	2							0							5							2							9							18						



PDI File #: **207450 BBCC**  
 Location: **N: Forest Street S: Burton Street NE: Mirak Mill Park West Driveway**  
 Location: **E: Massachusetts Avenue W: Massachusetts Avenue**  
 City, State: **Arlington, MA**  
 Client: **Nitsch Eng/B.Zimolka**  
 Site Code: **TBD**  
 Count Date: **Tuesday, February 4, 2020**  
 Start Time: **4:00 PM**  
 End Time: **6:00 PM**  
 Class:



### Pedestrians

	Forest Street								Mirak Mill Park West Driveway								Massachusetts Avenue								Burton Street								Massachusetts Avenue								Total	
	from North								from Northeast								from East								from South								from West									
	Right	Thru	Left	Hard Left	U-Turn	CW-EB	CW-WB	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	CW-SEB	CW-NWB	Total	Hard Right	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Bear Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Bear Left	Left	U-Turn	CW-NB	CW-SB	Total		
4:00 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	2	1	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	3	0	0	0	0	0	0	2	2	10
4:15 PM	0	0	0	0	0	1	1	2	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	4	5	0	0	0	0	0	3	1	4	12	
4:30 PM	0	0	0	0	0	1	1	2	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	5		
4:45 PM	0	0	0	0	0	5	2	7	0	0	0	0	0	6	2	8	0	0	0	0	0	0	0	0	0	0	0	0	0	3	2	5	0	0	0	0	0	1	0	1	21	
Total	0	0	0	0	0	9	4	13	0	0	0	0	0	9	5	14	0	0	0	0	0	0	0	0	0	0	0	0	0	5	8	13	0	0	0	0	0	5	3	8	48	
5:00 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	2	2	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	1	1	7		
5:15 PM	0	0	0	0	0	3	3	6	0	0	0	0	0	3	2	5	0	0	0	0	0	0	0	0	0	0	0	0	0	3	1	4	0	0	0	0	0	0	1	1	16	
5:30 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3	4	0	0	0	0	0	1	1	2	10	
5:45 PM	0	0	0	0	0	0	1	1	0	0	0	0	0	1	2	3	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	5		
Total	0	0	0	0	0	6	4	10	0	0	0	0	0	8	6	14	0	0	0	0	0	0	0	0	0	0	0	0	0	5	5	10	0	0	0	0	0	1	3	4	38	
Grand Total	0	0	0	0	0	15	8	23	0	0	0	0	0	17	11	28	0	0	0	0	0	0	0	0	0	0	0	0	0	10	13	23	0	0	0	0	0	6	6	12	86	
Approach %	0	0	0	0	0	65.2	34.8		0	0	0	0	0	60.7	39.3		0	0	0	0	0	0	0	0	0	0	0	0	0	43.5	56.5		0	0	0	0	0	50	50			
Total %	0	0	0	0	0	17.4	9.3	26.7	0	0	0	0	0	19.8	12.8	32.6	0	0	0	0	0	0	0	0	0	0	0	0	0	11.6	15.1	26.7	0	0	0	0	0	6.98	6.98	14		
Exiting Leg Total	23								28								0								23								12								86	

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:45 PM	Forest Street								Mirak Mill Park West Driveway								Massachusetts Avenue								Burton Street								Massachusetts Avenue								Total
	from North								from Northeast								from East								from South								from West								
	Right	Thru	Left	Hard Left	U-Turn	CW-EB	CW-WB	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	CW-SEB	CW-NWB	Total	Hard Right	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Bear Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Bear Left	Left	U-Turn	CW-NB	CW-SB	Total	
4:45 PM	0	0	0	0	0	5	2	7	0	0	0	0	0	6	2	8	0	0	0	0	0	0	0	0	0	0	0	0	0	3	2	5	0	0	0	0	0	1	0	1	21
5:00 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	2	2	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	1	1	7	
5:15 PM	0	0	0	0	0	3	3	6	0	0	0	0	0	3	2	5	0	0	0	0	0	0	0	0	0	0	0	0	0	3	1	4	0	0	0	0	0	0	1	1	16
5:30 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3	4	0	0	0	0	0	1	1	2	10
Total Volume	0	0	0	0	0	11	5	16	0	0	0	0	0	13	6	19	0	0	0	0	0	0	0	0	0	0	0	0	0	7	7	14	0	0	0	0	0	2	3	5	54
% Approach Total	0.0	0.0	0.0	0.0	0.0	68.8	31.3		0.0	0.0	0.0	0.0	0.0	68.4	31.6		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	50.0	50.0		0.0	0.0	0.0	0.0	0.0	40.0	60.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.550	0.417	0.571	0.000	0.000	0.000	0.000	0.000	0.542	0.750	0.594	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.583	0.583	0.700	0.000	0.000	0.000	0.000	0.000	0.500	0.750	0.625	0.643	
Entering Leg	0	0	0	0	0	11	5	16	0	0	0	0	0	13	6	19	0	0	0	0	0	0	0	0	0	0	0	0	7	7	14	0	0	0	0	0	2	3	5	54	
Exiting Leg	16								19								0								14								5								54
Total	32								38								0								28								10								108



PDI File #: 207450 BC  
 Location: N: Forest Street S: Burton Street NE: Mirak Mill Park West Driveway  
 Location: E: Massachusetts Avenue W: Massachusetts Avenue  
 City, State: Arlington, MA  
 Client: Nitsch Eng/B.Zimolka  
 Site Code: TBD  
 Count Date: Tuesday, February 4, 2020  
 Start Time: 7:00 AM  
 End Time: 9:00 AM  
 Class:



### Cars and Heavy Vehicles (Combined)

	Forest Street						Mirak Mill Park West Driveway						Massachusetts Avenue						Burton Street						Massachusetts Avenue						
	from North						from Northeast						from East						from South						from West						
	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Thru	Left	U-Turn	Total	Right	Bear Right	Thru	Left	U-Turn	Total	Right	Thru	Bear Left	Left	U-Turn	Total	
7:00 AM	46	4	20	0	0	70	0	1	0	0	0	1	0	8	90	0	0	98	3	0	1	0	0	4	0	88	2	13	0	103	276
7:15 AM	50	3	13	1	0	67	0	0	0	0	0	0	1	6	75	0	0	82	3	0	0	0	0	3	0	106	3	10	0	119	271
7:30 AM	53	11	13	0	0	77	0	0	0	0	0	0	3	29	102	1	1	136	8	0	2	0	0	10	0	97	2	22	0	121	344
7:45 AM	41	9	20	0	0	70	0	0	0	0	0	0	0	25	116	5	0	146	9	0	7	0	0	16	0	111	5	25	0	141	373
Total	190	27	66	1	0	284	0	1	0	0	0	1	4	68	383	6	1	462	23	0	10	0	0	33	0	402	12	70	0	484	1264
8:00 AM	57	1	21	0	0	79	1	0	0	1	0	2	2	27	124	2	0	155	0	0	0	0	0	0	1	82	4	28	0	115	351
8:15 AM	43	1	11	0	0	55	0	0	0	0	0	0	1	13	90	0	0	104	1	1	0	0	0	2	0	93	9	13	0	115	276
8:30 AM	31	0	10	1	0	42	0	0	0	0	0	0	0	14	93	0	0	107	4	0	2	1	0	7	0	103	4	13	0	120	276
8:45 AM	28	1	10	1	0	40	0	0	0	2	0	2	1	14	115	0	0	130	2	0	0	2	0	4	0	98	4	13	0	115	291
Total	159	3	52	2	0	216	1	0	0	3	0	4	4	68	422	2	0	496	7	1	2	3	0	13	1	376	21	67	0	465	1194
Grand Total	349	30	118	3	0	500	1	1	0	3	0	5	8	136	805	8	1	958	30	1	12	3	0	46	1	778	33	137	0	949	2458
Approach %	69.8	6.0	23.6	0.6	0.0		20.0	20.0	0.0	60.0	0.0		0.8	14.2	84.0	0.8	0.1		65.2	2.2	26.1	6.5	0.0		0.1	82.0	3.5	14.4	0.0		
Total %	14.2	1.2	4.8	0.1	0.0	20.3	0.0	0.0	0.0	0.1	0.0	0.2	0.3	5.5	32.8	0.3	0.0	39.0	1.2	0.0	0.5	0.1	0.0	1.9	0.0	31.7	1.3	5.6	0.0	38.6	
Exiting Leg Total	286						45						930						39						1158						2458
Cars	340	30	113	3	0	486	1	1	0	3	0	5	8	132	749	8	1	898	30	1	12	2	0	45	1	713	33	133	0	880	2314
% Cars	97.4	100.0	95.8	100.0	0.0	97.2	100.0	100.0	0.0	100.0	0.0	100.0	100.0	97.1	93.0	100.0	93.7	100.0	100.0	100.0	66.7	0.0	97.8	100.0	91.6	100.0	97.1	0.0	92.7	94.1	
Exiting Leg Total	278						45						860						39						1092						2314
Heavy Vehicles	9	0	5	0	0	14	0	0	0	0	0	0	0	4	56	0	0	60	0	0	0	1	0	1	0	65	0	4	0	69	144
% Heavy Vehicles	2.6	0.0	4.2	0.0	0.0	2.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.9	7.0	0.0	0.0	6.3	0.0	0.0	0.0	33.3	0.0	2.2	0.0	8.4	0.0	2.9	0.0	7.3	5.9
Exiting Leg Total	8						0						70						0						66						144

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:30 AM	Forest Street						Mirak Mill Park West Driveway						Massachusetts Avenue						Burton Street						Massachusetts Avenue						
	from North						from Northeast						from East						from South						from West						
	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Thru	Left	U-Turn	Total	Right	Bear Right	Thru	Left	U-Turn	Total	Right	Thru	Bear Left	Left	U-Turn	Total	
7:30 AM	53	11	13	0	0	77	0	0	0	0	0	0	3	29	102	1	1	136	8	0	2	0	0	10	0	97	2	22	0	121	344
7:45 AM	41	9	20	0	0	70	0	0	0	0	0	0	0	25	116	5	0	146	9	0	7	0	0	16	0	111	5	25	0	141	373
8:00 AM	57	1	21	0	0	79	1	0	0	1	0	2	2	27	124	2	0	155	0	0	0	0	0	0	1	82	4	28	0	115	351
8:15 AM	43	1	11	0	0	55	0	0	0	0	0	0	1	13	90	0	0	104	1	1	0	0	0	2	0	93	9	13	0	115	276
Total Volume	194	22	65	0	0	281	1	0	0	1	0	2	6	94	432	8	1	541	18	1	9	0	0	28	1	383	20	88	0	492	1344
% Approach Total	69.0	7.8	23.1	0.0	0.0		50.0	0.0	0.0	50.0	0.0		1.1	17.4	79.9	1.5	0.2		64.3	3.6	32.1	0.0	0.0		0.2	77.8	4.1	17.9	0.0		
PHF	0.851	0.500	0.774	0.000	0.000	0.889	0.250	0.000	0.000	0.250	0.000	0.250	0.500	0.810	0.871	0.400	0.250	0.873	0.500	0.250	0.321	0.000	0.000	0.438	0.250	0.863	0.556	0.786	0.000	0.872	0.901
Cars	191	22	63	0	0	276	1	0	0	1	0	2	6	93	407	8	1	515	18	1	9	0	0	28	1	347	20	85	0	453	1274
Cars %	98.5	100.0	96.9	0.0	0.0	98.2	100.0	0.0	0.0	100.0	0.0	100.0	100.0	98.9	94.2	100.0	95.2	100.0	100.0	100.0	0.0	0.0	100.0	100.0	90.6	100.0	96.6	0.0	92.1	94.8	
Heavy Vehicles	3	0	2	0	0	5	0	0	0	0	0	0	0	1	25	0	0	26	0	0	0	0	0	0	0	36	0	3	0	39	70
Heavy Vehicles %	1.5	0.0	3.1	0.0	0.0	1.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	5.8	0.0	0.0	4.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.4	0.0	3.4	0.0	7.9	5.2
Cars Enter Leg	191	22	63	0	0	276	1	0	0	1	0	2	6	93	407	8	1	515	18	1	9	0	0	28	1	347	20	85	0	453	1274
Heavy Enter Leg	3	0	2	0	0	5	0	0	0	0	0	0	0	1	25	0	0	26	0	0	0	0	0	0	0	36	0	3	0	39	70
Total Entering Leg	194	22	65	0	0	281	1	0	0	1	0	2	6	94	432	8	1	541	18	1	9	0	0	28	1	383	20	88	0	492	1344
Cars Exiting Leg	188						27						430						31						598						1274
Heavy Exiting Leg	4						0						38						0						28						70
Total Exiting Leg	192						27						468						31						626						1344



PDI File #: **207450 BC**  
 Location: **N: Forest Street S: Burton Street NE: Mirak Mill Park West Driveway**  
 Location: **E: Massachusetts Avenue W: Massachusetts Avenue**  
 City, State: **Arlington, MA**  
 Client: **Nitsch Eng/B.Zimolka**  
 Site Code: **TBD**  
 Count Date: **Tuesday, February 4, 2020**  
 Start Time: **7:00 AM**  
 End Time: **9:00 AM**  
 Class:



**Cars**

	Forest Street						Mirak Mill Park West Driveway						Massachusetts Avenue						Burton Street						Massachusetts Avenue						Total
	from North						from Northeast						from East						from South						from West						
	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Thru	Left	U-Turn	Total	Right	Bear Right	Thru	Left	U-Turn	Total	Right	Thru	Bear Left	Left	U-Turn	Total	
7:00 AM	44	4	18	0	0	66	0	1	0	0	0	1	0	8	79	0	0	87	3	0	1	0	0	4	0	79	2	13	0	94	252
7:15 AM	48	3	13	1	0	65	0	0	0	0	0	0	1	5	69	0	0	75	3	0	0	0	0	3	0	97	3	10	0	110	253
7:30 AM	52	11	13	0	0	76	0	0	0	0	0	0	3	28	94	1	1	127	8	0	2	0	0	10	0	88	2	19	0	109	322
7:45 AM	41	9	20	0	0	70	0	0	0	0	0	0	0	25	110	5	0	140	9	0	7	0	0	16	0	100	5	25	0	130	356
Total	185	27	64	1	0	277	0	1	0	0	0	1	4	66	352	6	1	429	23	0	10	0	0	33	0	364	12	67	0	443	1183
8:00 AM	57	1	19	0	0	77	1	0	0	1	0	2	2	27	118	2	0	149	0	0	0	0	0	0	1	77	4	28	0	110	338
8:15 AM	41	1	11	0	0	53	0	0	0	0	0	0	1	13	85	0	0	99	1	1	0	0	0	2	0	82	9	13	0	104	258
8:30 AM	30	0	10	1	0	41	0	0	0	0	0	0	0	13	86	0	0	99	4	0	2	1	0	7	0	98	4	12	0	114	261
8:45 AM	27	1	9	1	0	38	0	0	0	2	0	2	1	13	108	0	0	122	2	0	0	1	0	3	0	92	4	13	0	109	274
Total	155	3	49	2	0	209	1	0	0	3	0	4	4	66	397	2	0	469	7	1	2	2	0	12	1	349	21	66	0	437	1131
Grand Total	340	30	113	3	0	486	1	1	0	3	0	5	8	132	749	8	1	898	30	1	12	2	0	45	1	713	33	133	0	880	2314
Approach %	70.0	6.2	23.3	0.6	0.0		20.0	20.0	0.0	60.0	0.0		0.9	14.7	83.4	0.9	0.1		66.7	2.2	26.7	4.4	0.0		0.1	81.0	3.8	15.1	0.0		
Total %	14.7	1.3	4.9	0.1	0.0	21.0	0.0	0.0	0.0	0.1	0.0	0.2	0.3	5.7	32.4	0.3	0.0	38.8	1.3	0.0	0.5	0.1	0.0	1.9	0.0	30.8	1.4	5.7	0.0	38.0	
Exiting Leg Total						278						45					860						39							1092	2314

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:30 AM	Forest Street						Mirak Mill Park West Driveway						Massachusetts Avenue						Burton Street						Massachusetts Avenue						
	from North						from Northeast						from East						from South						from West						
	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Thru	Left	U-Turn	Total	Right	Bear Right	Thru	Left	U-Turn	Total	Right	Thru	Bear Left	Left	U-Turn	Total	
7:30 AM	52	11	13	0	0	76	0	0	0	0	0	0	3	28	94	1	1	127	8	0	2	0	0	10	0	88	2	19	0	109	322
7:45 AM	41	9	20	0	0	70	0	0	0	0	0	0	0	25	110	5	0	140	9	0	7	0	0	16	0	100	5	25	0	130	356
8:00 AM	57	1	19	0	0	77	1	0	0	1	0	2	2	27	118	2	0	149	0	0	0	0	0	0	1	77	4	28	0	110	338
8:15 AM	41	1	11	0	0	53	0	0	0	0	0	0	1	13	85	0	0	99	1	1	0	0	0	2	0	82	9	13	0	104	258
Total Volume	191	22	63	0	0	276	1	0	0	1	0	2	6	93	407	8	1	515	18	1	9	0	0	28	1	347	20	85	0	453	1274
% Approach Total	69.2	8.0	22.8	0.0	0.0		50.0	0.0	0.0	50.0	0.0		1.2	18.1	79.0	1.6	0.2		64.3	3.6	32.1	0.0	0.0		0.2	76.6	4.4	18.8	0.0		
PHF	0.838	0.500	0.788	0.000	0.000	0.896	0.250	0.000	0.000	0.250	0.000	0.250	0.500	0.830	0.862	0.400	0.250	0.864	0.500	0.250	0.321	0.000	0.000	0.438	0.250	0.868	0.556	0.759	0.000	0.871	0.895
Entering Leg	191	22	63	0	0	276	1	0	0	1	0	2	6	93	407	8	1	515	18	1	9	0	0	28	1	347	20	85	0	453	1274
Exiting Leg						188						27						430						31						598	1274
Total						464						29						945						59						1051	2548



PDI File #: 207450 BC  
 Location: N: Forest Street S: Burton Street NE: Mirak Mill Park West Driveway  
 Location: E: Massachusetts Avenue W: Massachusetts Avenue  
 City, State: Arlington, MA  
 Client: Nitsch Eng/B.Zimolka  
 Site Code: TBD  
 Count Date: Tuesday, February 4, 2020  
 Start Time: 7:00 AM  
 End Time: 9:00 AM  
 Class:



### Heavy Vehicles-Combined (Buses, Single-Unit Trucks, Articulated Trucks)

	Forest Street						Mirak Mill Park West Driveway						Massachusetts Avenue						Burton Street						Massachusetts Avenue							
	from North						from Northeast						from East						from South						from West							
	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Thru	Left	U-Turn	Total	Right	Bear Right	Thru	Left	U-Turn	Total	Right	Thru	Bear Left	Left	U-Turn	Total		
7:00 AM	2	0	2	0	0	4	0	0	0	0	0	0	0	0	11	0	0	11	0	0	0	0	0	0	0	0	9	0	0	0	9	24
7:15 AM	2	0	0	0	0	2	0	0	0	0	0	0	0	1	6	0	0	7	0	0	0	0	0	0	0	0	9	0	0	0	9	18
7:30 AM	1	0	0	0	0	1	0	0	0	0	0	0	0	1	8	0	0	9	0	0	0	0	0	0	0	0	9	0	3	0	12	22
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	0	0	0	11	0	0	0	11	17
Total	5	0	2	0	0	7	0	0	0	0	0	0	0	2	31	0	0	33	0	0	0	0	0	0	0	0	38	0	3	0	41	81
8:00 AM	0	0	2	0	0	2	0	0	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	0	0	0	5	0	0	0	5	13
8:15 AM	2	0	0	0	0	2	0	0	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	0	0	0	11	0	0	0	11	18
8:30 AM	1	0	0	0	0	1	0	0	0	0	0	0	0	1	7	0	0	8	0	0	0	0	0	0	0	0	5	0	1	0	6	15
8:45 AM	1	0	1	0	0	2	0	0	0	0	0	0	0	1	7	0	0	8	0	0	0	1	0	1	0	6	0	0	0	0	6	17
Total	4	0	3	0	0	7	0	0	0	0	0	0	0	2	25	0	0	27	0	0	0	1	0	1	0	27	0	1	0	28	63	
Grand Total	9	0	5	0	0	14	0	0	0	0	0	0	0	4	56	0	0	60	0	0	0	1	0	1	0	65	0	4	0	69	144	
Approach %	64.3	0.0	35.7	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	6.7	93.3	0.0	0.0		0.0	0.0	0.0	100.0	0.0		0.0	94.2	0.0	5.8	0.0			
Total %	6.3	0.0	3.5	0.0	0.0	9.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.8	38.9	0.0	0.0	41.7	0.0	0.0	0.0	0.7	0.0	0.7	0.0	45.1	0.0	2.8	0.0	47.9		
Exiting Leg Total	8						0						70						0						66						144	
Buses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	24	0	0	24	0	0	0	0	0	0	0	0	21	0	0	0	21	45
% Buses	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	42.9	0.0	0.0	40.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	32.3	0.0	0.0	0.0	30.4	31.3
Exiting Leg Total	0						0						21						0						24						45	
Single-Unit Trucks	9	0	5	0	0	14	0	0	0	0	0	0	0	3	29	0	0	32	0	0	0	1	0	1	0	38	0	3	0	41	88	
% Single-Unit	100.0	0.0	100.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	75.0	51.8	0.0	0.0	53.3	0.0	0.0	0.0	100.0	0.0	100.0	0.0	58.5	0.0	75.0	0.0	59.4	61.1	
Exiting Leg Total	6						0						43						0						39						88	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3	0	0	4	0	0	0	0	0	0	0	0	6	0	1	0	7	11
% Articulated	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25.0	5.4	0.0	0.0	6.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.2	0.0	25.0	0.0	10.1	7.6
Exiting Leg Total	2						0						6						0						3						11	

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:00 AM	Forest Street						Mirak Mill Park West Driveway						Massachusetts Avenue						Burton Street						Massachusetts Avenue						Total	
	from North						from Northeast						from East						from South						from West							
	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Thru	Left	U-Turn	Total	Right	Bear Right	Thru	Left	U-Turn	Total	Right	Thru	Bear Left	Left	U-Turn	Total		
7:00 AM	2	0	2	0	0	4	0	0	0	0	0	0	0	0	11	0	0	11	0	0	0	0	0	0	0	0	9	0	0	0	9	24
7:15 AM	2	0	0	0	0	2	0	0	0	0	0	0	0	1	6	0	0	7	0	0	0	0	0	0	0	9	0	0	0	0	9	18
7:30 AM	1	0	0	0	0	1	0	0	0	0	0	0	0	1	8	0	0	9	0	0	0	0	0	0	0	9	0	3	0	12	22	
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	0	0	0	11	0	0	0	11	17
Total Volume	5	0	2	0	0	7	0	0	0	0	0	0	0	2	31	0	0	33	0	0	0	0	0	0	0	0	38	0	3	0	41	81
% Approach Total	71.4	0.0	28.6	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	6.1	93.9	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	92.7	0.0	7.3	0.0			
PHF	0.625	0.000	0.250	0.000	0.000	0.438	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.500	0.705	0.000	0.000	0.750	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.864	0.000	0.250	0.000	0.854	0.844	
Buses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15	0	0	15	0	0	0	0	0	0	0	9	0	0	0	9	24	
Buses %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	48.4	0.0	0.0	45.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	23.7	0.0	0.0	0.0	22.0	29.6	
Single-Unit Trucks	5	0	2	0	0	7	0	0	0	0	0	0	0	2	15	0	0	17	0	0	0	0	0	0	0	24	0	2	0	26	50	
Single-Unit %	100.0	0.0	100.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	48.4	0.0	0.0	51.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	63.2	0.0	66.7	0.0	63.4	61.7	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	5	0	1	0	6	7	
Articulated %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.2	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13.2	0.0	33.3	0.0	14.6	8.6	
Buses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15	0	0	15	0	0	0	0	0	0	0	9	0	0	0	9	24	
Single-Unit Trucks	5	0	2	0	0	7	0	0	0	0	0	0	0	2	15	0	0	17	0	0	0	0	0	0	0	24	0	2	0	26	50	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	5	0	1	0	6	7	
Total Entering Leg	5	0	2	0	0	7	0	0	0	0	0	0	0	2	31	0	0	33	0	0	0	0	0	0	0	38	0	3	0	41	81	
Buses	0						0						9						0						15						24	
Single-Unit Trucks	4						0						26						0						20						50	
Articulated Trucks	1						0						5						0						1						7	
Total Exiting Leg	5						0						40						0						36						81	



PDI File #: 207450 BC  
 Location: N: Forest Street S: Burton Street NE: Mirak Mill Park West Driveway  
 Location: E: Massachusetts Avenue W: Massachusetts Avenue  
 City, State: Arlington, MA  
 Client: Nitsch Eng/B.Zimolka  
 Site Code: TBD  
 Count Date: Tuesday, February 4, 2020  
 Start Time: 7:00 AM  
 End Time: 9:00 AM  
 Class:



### Buses

	Forest Street						Mirak Mill Park West Driveway						Massachusetts Avenue						Burton Street						Massachusetts Avenue						Total	
	from North						from Northeast						from East						from South						from West							
	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Thru	Left	U-Turn	Total	Right	Bear Right	Thru	Left	U-Turn	Total	Right	Thru	Bear Left	Left	U-Turn	Total		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	0	0	0	4	0	0	0	4	9
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	0	2	0	0	0	2	6	
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3	
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	0	0	3	0	0	0	3	6
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15	0	0	15	0	0	0	0	0	0	0	0	9	0	0	0	9	24
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	0	0	4	0	0	0	4	7
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	4	4	
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	0	0	2	0	0	0	2	5
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	0	0	2	0	0	0	2	5
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	0	0	9	0	0	0	0	0	0	0	0	12	0	0	0	12	21
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	24	0	0	24	0	0	0	0	0	0	0	0	21	0	0	0	21	45
Approach %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	53.3	0.0	0.0	53.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	46.7	0.0	0.0	0.0	46.7	
Exiting Leg Total	0						0						21						0						24						45	

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:00 AM	Forest Street						Mirak Mill Park West Driveway						Massachusetts Avenue						Burton Street						Massachusetts Avenue							
	from North						from Northeast						from East						from South						from West							
	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Thru	Left	U-Turn	Total	Right	Bear Right	Thru	Left	U-Turn	Total	Right	Thru	Bear Left	Left	U-Turn	Total		Total
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	0	0	0	4	0	0	0	0	9
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	0	0	2	0	0	0	2	6
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3	
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	0	0	3	0	0	0	3	6
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15	0	0	15	0	0	0	0	0	0	0	0	9	0	0	0	9	24
% Approach Total	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0	0.0			
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.750	0.000	0.000	0.750	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.563	0.000	0.000	0.000	0.563	0.667	
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15	0	0	15	0	0	0	0	0	0	0	0	9	0	0	0	9	24
Exiting Leg	0						0						9						0						15						24	
Total	0						0						24						0						24						48	



PDI File #: **207450 BC**  
 Location: **N: Forest Street S: Burton Street NE: Mirak Mill Park West Driveway**  
 Location: **E: Massachusetts Avenue W: Massachusetts Avenue**  
 City, State: **Arlington, MA**  
 Client: **Nitsch Eng/B.Zimolka**  
 Site Code: **TBD**  
 Count Date: **Tuesday, February 4, 2020**  
 Start Time: **7:00 AM**  
 End Time: **9:00 AM**  
 Class:



### Single-Unit Trucks

	Forest Street						Mirak Mill Park West Driveway						Massachusetts Avenue						Burton Street						Massachusetts Avenue						Total
	from North						from Northeast						from East						from South						from West						
	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Thru	Left	U-Turn	Total	Right	Bear Right	Thru	Left	U-Turn	Total	Right	Thru	Bear Left	Left	U-Turn	Total	
7:00 AM	2	0	2	0	0	4	0	0	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	0	0	4	0	0	0	4	14
7:15 AM	2	0	0	0	0	2	0	0	0	0	0	0	0	1	2	0	0	3	0	0	0	0	0	0	0	4	0	0	0	4	9
7:30 AM	1	0	0	0	0	1	0	0	0	0	0	0	0	1	5	0	0	6	0	0	0	0	0	0	0	9	0	2	0	11	18
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	7	0	0	0	7	9
Total	5	0	2	0	0	7	0	0	0	0	0	0	0	2	15	0	0	17	0	0	0	0	0	0	0	24	0	2	0	26	50
8:00 AM	0	0	2	0	0	2	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	0	1	0	0	0	1	6
8:15 AM	2	0	0	0	0	2	0	0	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	0	6	0	0	0	6	12
8:30 AM	1	0	0	0	0	1	0	0	0	0	0	0	0	1	4	0	0	5	0	0	0	0	0	0	0	3	0	1	0	4	10
8:45 AM	1	0	1	0	0	2	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	1	0	1	0	4	0	0	0	4	10
Total	4	0	3	0	0	7	0	0	0	0	0	0	0	1	14	0	0	15	0	0	0	1	0	1	0	14	0	1	0	15	38
Grand Total	9	0	5	0	0	14	0	0	0	0	0	0	0	3	29	0	0	32	0	0	0	1	0	1	0	38	0	3	0	41	88
Approach %	64.3	0.0	35.7	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	9.4	90.6	0.0	0.0		0.0	0.0	0.0	100.0	0.0		0.0	92.7	0.0	7.3	0.0		
Total %	10.2	0.0	5.7	0.0	0.0	15.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.4	33.0	0.0	0.0	36.4	0.0	0.0	0.0	1.1	0.0	1.1	0.0	43.2	0.0	3.4	0.0	46.6	
Exiting Leg Total	6						0						43						0						39						88

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:00 AM	Forest Street						Mirak Mill Park West Driveway						Massachusetts Avenue						Burton Street						Massachusetts Avenue						Total
	from North						from Northeast						from East						from South						from West						
	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Thru	Left	U-Turn	Total	Right	Bear Right	Thru	Left	U-Turn	Total	Right	Thru	Bear Left	Left	U-Turn	Total	
7:00 AM	2	0	2	0	0	4	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0	0	4	0	0	0	4	14
7:15 AM	2	0	0	0	0	2	0	0	0	0	0	0	0	1	2	0	0	3	0	0	0	0	0	0	0	4	4	0	0	4	9
7:30 AM	1	0	0	0	0	1	0	0	0	0	0	0	0	1	5	0	0	6	0	0	0	0	0	0	0	9	0	2	0	11	18
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	7	0	0	0	7	9
Total Volume	5	0	2	0	0	7	0	0	0	0	0	0	0	2	15	0	0	17	0	0	0	0	0	0	0	24	0	2	0	26	50
% Approach Total	71.4	0.0	28.6	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	11.8	88.2	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	92.3	0.0	7.7	0.0		
PHF	0.625	0.000	0.250	0.000	0.000	0.438	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.500	0.625	0.000	0.000	0.708	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.667	0.000	0.250	0.000	0.591	0.694
Entering Leg	5	0	2	0	0	7	0	0	0	0	0	0	0	2	15	0	0	17	0	0	0	0	0	0	0	24	0	2	0	26	50
Exiting Leg	4						0						26						0						20						50
Total	11						0						43						0						46						100



PDI File #: **207450 BC**  
 Location: **N: Forest Street S: Burton Street NE: Mirak Mill Park West Driveway**  
 Location: **E: Massachusetts Avenue W: Massachusetts Avenue**  
 City, State: **Arlington, MA**  
 Client: **Nitsch Eng/B.Zimolka**  
 Site Code: **TBD**  
 Count Date: **Tuesday, February 4, 2020**  
 Start Time: **7:00 AM**  
 End Time: **9:00 AM**  
 Class:



### Articulated Trucks

	Forest Street						Mirak Mill Park West Driveway						Massachusetts Avenue						Burton Street						Massachusetts Avenue						Total
	from North						from Northeast						from East						from South						from West						
	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Thru	Left	U-Turn	Total	Right	Bear Right	Thru	Left	U-Turn	Total	Right	Thru	Bear Left	Left	U-Turn	Total	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	3	
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	1	0	0	0	1	
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	5	0	1	0	6	
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	1	0	0	0	1	
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	0	0	0	0	0	0	2	
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0	0	3	0	0	0	0	0	0	0	1	0	0	0	1	
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3	0	0	4	0	0	0	0	0	0	0	6	0	1	0	7	
Approach %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25.0	75.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	85.7	0.0	14.3	0.0	0.0	
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.1	27.3	0.0	0.0	36.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	54.5	0.0	9.1	0.0	63.6	
Exiting Leg Total	2						0						6						0						3						11

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:00 AM	Forest Street						Mirak Mill Park West Driveway						Massachusetts Avenue						Burton Street						Massachusetts Avenue						Total
	from North						from Northeast						from East						from South						from West						
	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Thru	Left	U-Turn	Total	Right	Bear Right	Thru	Left	U-Turn	Total	Right	Thru	Bear Left	Left	U-Turn	Total	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	3	
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1		
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	1	0	0	1		
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	5	0	1	0	6	
% Approach Total	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	83.3	0.0	16.7	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.417	0.000	0.250	0.000	0.500	
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	5	0	1	0	6	
Exiting Leg	1						0						5						0						1						
Total	1						0						6						0						7						



PDI File #: 207450 BC  
 Location: N: Forest Street S: Burton Street NE: Mirak Mill Park West Driveway  
 Location: E: Massachusetts Avenue W: Massachusetts Avenue  
 City, State: Arlington, MA  
 Client: Nitsch Eng/B.Zimolka  
 Site Code: TBD  
 Count Date: Tuesday, February 4, 2020  
 Start Time: 7:00 AM  
 End Time: 9:00 AM  
 Class:



### Bicycles (on Roadway and Crosswalks)

	Forest Street								Mirak Mill Park West Driveway								Massachusetts Avenue								Burton Street								Massachusetts Avenue								Total	
	from North								from Northeast								from East								from South								from West									
	Right	Thru	Left	Hard Left	U-Turn	CW-EB	CW-WB	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	CW-SEB	CW-NWB	Total	Hard Right	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Bear Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Bear Left	Left	U-Turn	CW-NB	CW-SB	Total		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	3	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	4
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	3	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	4	
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1		
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1			
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	3	0	1	0	0	0	4	5		
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1		
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	4	0	3	0	0	0	7	8		
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	4	0	0	0	0	0	0	0	0	5	0	3	0	0	0	8	12		
Approach %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	62.5	0.0	37.5	0.0	0.0	0.0				
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	33.3	0.0	0.0	0.0	0.0	33.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	41.7	0.0	25.0	0.0	0.0	0.0	66.7			
Exiting Leg Total	3								0								5								0								4								12	

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

8:00 AM	Forest Street								Mirak Mill Park West Driveway								Massachusetts Avenue								Burton Street								Massachusetts Avenue								Total	
	from North								from Northeast								from East								from South								from West									
	Right	Thru	Left	Hard Left	U-Turn	CW-SB	CW-WB	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	CW-SEB	CW-NWB	Total	Hard Right	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Bear Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Bear Left	Left	U-Turn	CW-NB	CW-SB	Total		
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1		
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	3	0	1	0	0	0	4	5
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	4	0	3	0	0	0	7	8	
% Approach Total	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	57.1	0.0	42.9	0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.333	0.000	0.750	0.000	0.000	0.000	0.438	0.400		
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	4	0	3	0	0	0	7	8	
Exiting Leg	3								0								4								0								1								8	
Total	3								0								5								0								8								16	



PDI File #: **207450 BC**  
 Location: **N: Forest Street S: Burton Street NE: Mirak Mill Park West Driveway**  
 Location: **E: Massachusetts Avenue W: Massachusetts Avenue**  
 City, State: **Arlington, MA**  
 Client: **Nitsch Eng/B.Zimolka**  
 Site Code: **TBD**  
 Count Date: **Tuesday, February 4, 2020**  
 Start Time: **7:00 AM**  
 End Time: **9:00 AM**  
 Class:



### Pedestrians

	Forest Street								Mirak Mill Park West Driveway								Massachusetts Avenue								Burton Street								Massachusetts Avenue								Total	
	from North								from Northeast								from East								from South								from West									
	Right	Thru	Left	Hard Left	U-Turn	CW-SB	CW-WB	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	CW-SEB	CW-NWB	Total	Hard Right	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Bear Right	Thru	Left	U-Turn	CW-WB	CW-SB	Total	Right	Thru	Bear Left	Left	U-Turn	CW-NB	CW-SB	Total		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	0	0	0	0	0	0	1	1	6	
7:15 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	3	6		
7:30 AM	0	0	0	0	0	0	0	4	4	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	4	0	0	0	0	0	28	28	38	
7:45 AM	0	0	0	0	0	0	0	4	4	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	16	16	23	
Total	0	0	0	0	0	1	8	9	0	0	0	0	0	6	2	8	0	0	0	0	0	0	0	0	0	0	0	0	0	3	5	8	0	0	0	0	0	1	47	48	73	
8:00 AM	0	0	0	0	0	0	1	1	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	3			
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1		
8:30 AM	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	0	0	1	0	1	7
8:45 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	
Total	0	0	0	0	0	1	2	3	0	0	0	0	0	5	3	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	0	0	1	1	2	15
Grand Total	0	0	0	0	0	2	10	12	0	0	0	0	0	11	5	16	0	0	0	0	0	0	0	0	0	0	0	0	0	4	6	10	0	0	0	0	0	2	48	50	88	
Approach %	0	0	0	0	0	16.7	83.3		0	0	0	0	0	68.8	31.3		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	60		0	0	0	0	0	4	96		
Total %	0	0	0	0	0	2.27	11.4	13.6	0	0	0	0	0	12.5	5.68	18.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4.55	6.82	11.4	0	0	0	0	0	2.27	54.5	56.8	
Exiting Leg Total	12								16								0								10								50								88	

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:00 AM	Forest Street								Mirak Mill Park West Driveway								Massachusetts Avenue								Burton Street								Massachusetts Avenue								Total
	from North								from Northeast								from East								from South								from West								
	Right	Thru	Left	Hard Left	U-Turn	CW-EB	CW-WB	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	CW-SEB	CW-NWB	Total	Hard Right	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Bear Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Bear Left	Left	U-Turn	CW-NB	CW-SB	Total	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	0	0	0	0	0	0	1	1	6
7:15 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	3	6			
7:30 AM	0	0	0	0	0	0	4	4	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	4	0	0	0	0	0	28	28	38	
7:45 AM	0	0	0	0	0	0	4	4	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	16	16	23		
Total Volume	0	0	0	0	0	1	8	9	0	0	0	0	0	6	2	8	0	0	0	0	0	0	0	0	0	0	0	0	0	3	5	8	0	0	0	0	1	47	48	73	
% Approach Total	0.0	0.0	0.0	0.0	0.0	11.1	88.9		0.0	0.0	0.0	0.0	0.0	75.0	25.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	37.5	62.5		0.0	0.0	0.0	0.0	0.0	2.1	97.9		
PHF	0.000	0.000	0.000	0.000	0.000	0.250	0.500	0.563	0.000	0.000	0.000	0.000	0.000	0.750	0.250	1.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.313	0.500	0.000	0.000	0.000	0.000	0.000	0.250	0.420	0.429	0.480	
Entering Leg	0	0	0	0	0	1	8	9	0	0	0	0	0	6	2	8	0	0	0	0	0	0	0	0	0	0	0	0	0	3	5	8	0	0	0	0	0	1	47	48	73
Exiting Leg	9								8								0								8								48								73
Total	18								16								0								16								96								146



PDI File #: **207450 D**  
 Location: **S: Pine Court**  
 Location: **E: Massachusetts Avenue W: Massachusetts Avenue**  
 City, State: **Arlington, MA**  
 Client: **Nitsch Eng/B.Zimolka**  
 Site Code: **TBD**  
 Count Date: **Tuesday, February 4, 2020**  
 Start Time: **7:00 AM**  
 End Time: **9:00 AM**  
 Class:



### Cars and Heavy Vehicles (Combined)

	Massachusetts Avenue				Pine Court				Massachusetts Avenue				Total
	from East				from South				from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
7:00 AM	94	0	0	94	0	1	0	1	0	113	1	114	209
7:15 AM	79	0	0	79	0	2	0	2	0	115	0	115	196
7:30 AM	138	0	0	138	3	0	0	3	1	123	0	124	265
7:45 AM	143	0	0	143	0	1	0	1	0	139	0	139	283
Total	454	0	0	454	3	4	0	7	1	490	1	492	953
8:00 AM	152	0	0	152	4	0	0	4	0	105	0	105	261
8:15 AM	104	0	0	104	0	0	0	0	1	103	0	104	208
8:30 AM	107	0	0	107	0	1	0	1	0	120	0	120	228
8:45 AM	130	0	0	130	0	0	0	0	0	112	0	112	242
Total	493	0	0	493	4	1	0	5	1	440	0	441	939
Grand Total	947	0	0	947	7	5	0	12	2	930	1	933	1892
Approach %	100.0	0.0	0.0		58.3	41.7	0.0		0.2	99.7	0.1		
Total %	50.1	0.0	0.0	50.1	0.4	0.3	0.0	0.6	0.1	49.2	0.1	49.3	
Exiting Leg Total	937				2				953				1892
Cars	886	0	0	886	7	5	0	12	2	855	1	858	1756
% Cars	93.6	0.0	0.0	93.6	100.0	100.0	0.0	100.0	100.0	91.9	100.0	92.0	92.8
Exiting Leg Total	862				2				892				1756
Heavy Vehicles	61	0	0	61	0	0	0	0	0	75	0	75	136
% Heavy Vehicles	6.4	0.0	0.0	6.4	0.0	0.0	0.0	0.0	0.0	8.1	0.0	8.0	7.2
Exiting Leg Total	75				0				61				136

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:30 AM	Massachusetts Avenue				Pine Court				Massachusetts Avenue				Total
	from East				from South				from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
7:30 AM	138	0	0	138	3	0	0	3	1	123	0	124	265
7:45 AM	143	0	0	143	0	1	0	1	0	139	0	139	283
8:00 AM	152	0	0	152	4	0	0	4	0	105	0	105	261
8:15 AM	104	0	0	104	0	0	0	0	1	103	0	104	208
Total Volume	537	0	0	537	7	1	0	8	2	470	0	472	1017
% Approach Total	100.0	0.0	0.0		87.5	12.5	0.0		0.4	99.6	0.0		
PHF	0.883	0.000	0.000	0.883	0.438	0.250	0.000	0.500	0.500	0.845	0.000	0.849	0.898
Cars	510	0	0	510	7	1	0	8	2	429	0	431	949
Cars %	95.0	0.0	0.0	95.0	100.0	100.0	0.0	100.0	100.0	91.3	0.0	91.3	93.3
Heavy Vehicles	27	0	0	27	0	0	0	0	0	41	0	41	68
Heavy Vehicles %	5.0	0.0	0.0	5.0	0.0	0.0	0.0	0.0	0.0	8.7	0.0	8.7	6.7
Cars Enter Leg	510	0	0	510	7	1	0	8	2	429	0	431	949
Heavy Enter Leg	27	0	0	27	0	0	0	0	0	41	0	41	68
Total Entering Leg	537	0	0	537	7	1	0	8	2	470	0	472	1017
Cars Exiting Leg				436				2				511	949
Heavy Exiting Leg				41				0				27	68
Total Exiting Leg				477				2				538	1017



PDI File #: **207450 D**  
 Location: **S: Pine Court**  
 Location: **E: Massachusetts Avenue W: Massachusetts Avenue**  
 City, State: **Arlington, MA**  
 Client: **Nitsch Eng/B.Zimolka**  
 Site Code: **TBD**  
 Count Date: **Tuesday, February 4, 2020**  
 Start Time: **7:00 AM**  
 End Time: **9:00 AM**  
 Class:



### Cars

	Massachusetts Avenue				Pine Court				Massachusetts Avenue				Total
	from East				from South				from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
7:00 AM	83	0	0	83	0	1	0	1	0	100	1	101	185
7:15 AM	72	0	0	72	0	2	0	2	0	107	0	107	181
7:30 AM	129	0	0	129	3	0	0	3	1	112	0	113	245
7:45 AM	137	0	0	137	0	1	0	1	0	127	0	127	265
Total	421	0	0	421	3	4	0	7	1	446	1	448	876
8:00 AM	145	0	0	145	4	0	0	4	0	98	0	98	247
8:15 AM	99	0	0	99	0	0	0	0	1	92	0	93	192
8:30 AM	98	0	0	98	0	1	0	1	0	114	0	114	213
8:45 AM	123	0	0	123	0	0	0	0	0	105	0	105	228
Total	465	0	0	465	4	1	0	5	1	409	0	410	880
Grand Total	886	0	0	886	7	5	0	12	2	855	1	858	1756
Approach %	100.0	0.0	0.0		58.3	41.7	0.0		0.2	99.7	0.1		
Total %	50.5	0.0	0.0	50.5	0.4	0.3	0.0	0.7	0.1	48.7	0.1	48.9	
Exiting Leg Total	862				2				892				1756

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:30 AM	Massachusetts Avenue				Pine Court				Massachusetts Avenue				Total
	from East				from South				from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
7:30 AM	129	0	0	129	3	0	0	3	1	112	0	113	245
7:45 AM	137	0	0	137	0	1	0	1	0	127	0	127	265
8:00 AM	145	0	0	145	4	0	0	4	0	98	0	98	247
8:15 AM	99	0	0	99	0	0	0	0	1	92	0	93	192
Total Volume	510	0	0	510	7	1	0	8	2	429	0	431	949
% Approach Total	100.0	0.0	0.0		87.5	12.5	0.0		0.5	99.5	0.0		
PHF	0.879	0.000	0.000	0.879	0.438	0.250	0.000	0.500	0.500	0.844	0.000	0.848	0.895
Entering Leg	510	0	0	510	7	1	0	8	2	429	0	431	949
Exiting Leg				436				2				511	949
Total				946				10				942	1898



PDI File #: **207450 D**  
 Location: **S: Pine Court**  
 Location: **E: Massachusetts Avenue W: Massachusetts Avenue**  
 City, State: **Arlington, MA**  
 Client: **Nitsch Eng/B.Zimolka**  
 Site Code: **TBD**  
 Count Date: **Tuesday, February 4, 2020**  
 Start Time: **7:00 AM**  
 End Time: **9:00 AM**



Class: **Heavy Vehicles-Combined (Buses, Single-Unit Trucks, Articulated Trucks)**

	Massachusetts Avenue				Pine Court				Massachusetts Avenue				Total
	from East				from South				from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
7:00 AM	11	0	0	11	0	0	0	0	0	13	0	13	24
7:15 AM	7	0	0	7	0	0	0	0	0	8	0	8	15
7:30 AM	9	0	0	9	0	0	0	0	0	11	0	11	20
7:45 AM	6	0	0	6	0	0	0	0	0	12	0	12	18
Total	33	0	0	33	0	0	0	0	0	44	0	44	77
8:00 AM	7	0	0	7	0	0	0	0	0	7	0	7	14
8:15 AM	5	0	0	5	0	0	0	0	0	11	0	11	16
8:30 AM	9	0	0	9	0	0	0	0	0	6	0	6	15
8:45 AM	7	0	0	7	0	0	0	0	0	7	0	7	14
Total	28	0	0	28	0	0	0	0	0	31	0	31	59
Grand Total	61	0	0	61	0	0	0	0	0	75	0	75	136
Approach %	100.0	0.0	0.0		0.0	0.0	0.0		0.0	100.0	0.0		
Total %	44.9	0.0	0.0	44.9	0.0	0.0	0.0	0.0	0.0	55.1	0.0	55.1	
Exiting Leg Total	75				0				61				136
Buses	25	0	0	25	0	0	0	0	0	22	0	22	47
% Buses	41.0	0.0	0.0	41.0	0.0	0.0	0.0	0.0	0.0	29.3	0.0	29.3	34.6
Exiting Leg Total	22				0				25				47
Single-Unit Trucks	33	0	0	33	0	0	0	0	0	47	0	47	80
% Single-Unit	54.1	0.0	0.0	54.1	0.0	0.0	0.0	0.0	0.0	62.7	0.0	62.7	58.8
Exiting Leg Total	47				0				33				80
Articulated Trucks	3	0	0	3	0	0	0	0	0	6	0	6	9
% Articulated	4.9	0.0	0.0	4.9	0.0	0.0	0.0	0.0	0.0	8.0	0.0	8.0	6.6
Exiting Leg Total	6				0				3				9

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:00 AM	Massachusetts Avenue				Pine Court				Massachusetts Avenue				Total
	from East				from South				from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
7:00 AM	11	0	0	11	0	0	0	0	0	13	0	13	24
7:15 AM	7	0	0	7	0	0	0	0	0	8	0	8	15
7:30 AM	9	0	0	9	0	0	0	0	0	11	0	11	20
7:45 AM	6	0	0	6	0	0	0	0	0	12	0	12	18
Total Volume	33	0	0	33	0	0	0	0	0	44	0	44	77
% Approach Total	100.0	0.0	0.0		0.0	0.0	0.0		0.0	100.0	0.0		
PHF	0.750	0.000	0.000	0.750	0.000	0.000	0.000	0.000	0.000	0.846	0.000	0.846	0.802
Buses	16	0	0	16	0	0	0	0	0	10	0	10	26
Buses %	48.5	0.0	0.0	48.5	0.0	0.0	0.0	0.0	0.0	22.7	0.0	22.7	33.8
Single-Unit Trucks	17	0	0	17	0	0	0	0	0	29	0	29	46
Single-Unit %	51.5	0.0	0.0	51.5	0.0	0.0	0.0	0.0	0.0	65.9	0.0	65.9	59.7
Articulated Trucks	0	0	0	0	0	0	0	0	0	5	0	5	5
Articulated %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.4	0.0	11.4	6.5
Buses	16	0	0	16	0	0	0	0	0	10	0	10	26
Single-Unit Trucks	17	0	0	17	0	0	0	0	0	29	0	29	46
Articulated Trucks	0	0	0	0	0	0	0	0	0	5	0	5	5
Total Entering Leg	33	0	0	33	0	0	0	0	0	44	0	44	77
Buses				10				0				16	26
Single-Unit Trucks				29				0				17	46
Articulated Trucks				5				0				0	5
Total Exiting Leg				44				0				33	77



PDI File #: **207450 D**  
 Location: **S: Pine Court**  
 Location: **E: Massachusetts Avenue W: Massachusetts Avenue**  
 City, State: **Arlington, MA**  
 Client: **Nitsch Eng/B.Zimolka**  
 Site Code: **TBD**  
 Count Date: **Tuesday, February 4, 2020**  
 Start Time: **7:00 AM**  
 End Time: **9:00 AM**  
 Class:



### Buses

	Massachusetts Avenue					Pine Court					Massachusetts Avenue					Total
	from East					from South					from West					
	Thru	Left	U-Turn	Total		Right	Left	U-Turn	Total		Right	Thru	U-Turn	Total		
7:00 AM	5	0	0	0	5	0	0	0	0	0	0	4	0	0	4	9
7:15 AM	4	0	0	0	4	0	0	0	0	0	0	2	0	0	2	6
7:30 AM	4	0	0	0	4	0	0	0	0	0	0	0	0	0	0	4
7:45 AM	3	0	0	0	3	0	0	0	0	0	0	4	0	0	4	7
Total	16	0	0	0	16	0	0	0	0	0	0	10	0	0	10	26
8:00 AM	3	0	0	0	3	0	0	0	0	0	0	4	0	0	4	7
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	4	0	0	4	4
8:30 AM	3	0	0	0	3	0	0	0	0	0	0	2	0	0	2	5
8:45 AM	3	0	0	0	3	0	0	0	0	0	0	2	0	0	2	5
Total	9	0	0	0	9	0	0	0	0	0	0	12	0	0	12	21
Grand Total	25	0	0	0	25	0	0	0	0	0	0	22	0	0	22	47
Approach %	100.0	0.0	0.0			0.0	0.0	0.0			0.0	100.0	0.0			
Total %	53.2	0.0	0.0	53.2		0.0	0.0	0.0	0.0		0.0	46.8	0.0	46.8		
Exiting Leg Total	22					0					25					47

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:00 AM	Massachusetts Avenue				Pine Court				Massachusetts Avenue				Total
	from East				from South				from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
7:00 AM	5	0	0	5	0	0	0	0	0	4	0	4	9
7:15 AM	4	0	0	4	0	0	0	0	0	2	0	2	6
7:30 AM	4	0	0	4	0	0	0	0	0	0	0	0	4
7:45 AM	3	0	0	3	0	0	0	0	0	4	0	4	7
Total Volume	16	0	0	16	0	0	0	0	0	10	0	10	26
% Approach Total	100.0	0.0	0.0		0.0	0.0	0.0		0.0	100.0	0.0		
PHF	0.800	0.000	0.000	0.800	0.000	0.000	0.000	0.000	0.000	0.625	0.000	0.625	0.722
Entering Leg	16	0	0	16	0	0	0	0	0	10	0	10	26
Exiting Leg				10				0				16	26
Total				26				0				26	52



PDI File #: **207450 D**  
 Location: **S: Pine Court**  
 Location: **E: Massachusetts Avenue W: Massachusetts Avenue**  
 City, State: **Arlington, MA**  
 Client: **Nitsch Eng/B.Zimolka**  
 Site Code: **TBD**  
 Count Date: **Tuesday, February 4, 2020**  
 Start Time: **7:00 AM**  
 End Time: **9:00 AM**  
 Class:



### Single-Unit Trucks

	Massachusetts Avenue				Pine Court				Massachusetts Avenue				Total
	from East				from South				from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
7:00 AM	6	0	0	6	0	0	0	0	0	7	0	7	13
7:15 AM	3	0	0	3	0	0	0	0	0	4	0	4	7
7:30 AM	5	0	0	5	0	0	0	0	0	10	0	10	15
7:45 AM	3	0	0	3	0	0	0	0	0	8	0	8	11
Total	17	0	0	17	0	0	0	0	0	29	0	29	46
8:00 AM	4	0	0	4	0	0	0	0	0	3	0	3	7
8:15 AM	4	0	0	4	0	0	0	0	0	6	0	6	10
8:30 AM	6	0	0	6	0	0	0	0	0	4	0	4	10
8:45 AM	2	0	0	2	0	0	0	0	0	5	0	5	7
Total	16	0	0	16	0	0	0	0	0	18	0	18	34
Grand Total	33	0	0	33	0	0	0	0	0	47	0	47	80
Approach %	100.0	0.0	0.0		0.0	0.0	0.0			100.0	0.0		
Total %	41.3	0.0	0.0	41.3	0.0	0.0	0.0	0.0	0.0	58.8	0.0	58.8	
Exiting Leg Total	47				0				33				80

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:00 AM	Massachusetts Avenue				Pine Court				Massachusetts Avenue				Total
	from East				from South				from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
7:00 AM	6	0	0	6	0	0	0	0	0	7	0	7	13
7:15 AM	3	0	0	3	0	0	0	0	0	4	0	4	7
7:30 AM	5	0	0	5	0	0	0	0	0	10	0	10	15
7:45 AM	3	0	0	3	0	0	0	0	0	8	0	8	11
Total Volume	17	0	0	17	0	0	0	0	0	29	0	29	46
% Approach Total	100.0	0.0	0.0		0.0	0.0	0.0		0.0	100.0	0.0		
PHF	0.708	0.000	0.000	0.708	0.000	0.000	0.000	0.000	0.000	0.725	0.000	0.725	0.767
Entering Leg	17	0	0	17	0	0	0	0	0	29	0	29	46
Exiting Leg				29				0				17	46
Total				46				0				46	92



PDI File #: **207450 D**  
 Location: **S: Pine Court**  
 Location: **E: Massachusetts Avenue W: Massachusetts Avenue**  
 City, State: **Arlington, MA**  
 Client: **Nitsch Eng/B.Zimolka**  
 Site Code: **TBD**  
 Count Date: **Tuesday, February 4, 2020**  
 Start Time: **7:00 AM**  
 End Time: **9:00 AM**  
 Class:



### Articulated Trucks

	Massachusetts Avenue					Pine Court					Massachusetts Avenue					Total
	from East					from South					from West					
	Thru	Left	U-Turn	Total		Right	Left	U-Turn	Total		Right	Thru	U-Turn	Total		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	2
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	2
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	5	0	0	5	5
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	1	0	0	1	1	0	0	0	0	0	0	1	0	0	1	2
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	2	0	0	2	2	0	0	0	0	0	0	0	0	0	0	2
Total	3	0	0	3	3	0	0	0	0	0	0	1	0	0	1	4
Grand Total	3	0	0	3	3	0	0	0	0	0	0	6	0	0	6	9
Approach %	100.0	0.0	0.0			0.0	0.0	0.0			0.0	100.0	0.0			
Total %	33.3	0.0	0.0	33.3		0.0	0.0	0.0	0.0		0.0	66.7	0.0	66.7		
Exiting Leg Total	6					0					3					9

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:00 AM	Massachusetts Avenue				Pine Court				Massachusetts Avenue				Total
	from East				from South				from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
7:00 AM	0	0	0	0	0	0	0	0	0	2	0	2	2
7:15 AM	0	0	0	0	0	0	0	0	0	2	0	2	2
7:30 AM	0	0	0	0	0	0	0	0	0	1	0	1	1
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	5	0	5	5
% Approach Total	0.0	0.0	0.0		0.0	0.0	0.0		0.0	100.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.625	0.000	0.625	0.625
Entering Leg	0	0	0	0	0	0	0	0	0	5	0	5	5
Exiting Leg				5				0				0	5
Total				5				0				5	10



PDI File #: **207450 D**  
 Location: **S: Pine Court**  
 Location: **E: Massachusetts Avenue W: Massachusetts Avenue**  
 City, State: **Arlington, MA**  
 Client: **Nitsch Eng/B.Zimolka**  
 Site Code: **TBD**  
 Count Date: **Tuesday, February 4, 2020**  
 Start Time: **7:00 AM**  
 End Time: **9:00 AM**



Class: **Bicycles (on Roadway and Crosswalks)**

	Massachusetts Avenue						Pine Court						Massachusetts Avenue						Total	
	from East						from South						from West							
	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	U-Turn	CW-NB	CW-SB	Total		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	3	0	0	0	0	3	0	0	0	0	0	0	0	2	0	0	0	0	2	5
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	3	0	0	0	0	3	0	0	0	0	0	0	0	2	0	0	0	0	2	5
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1
8:30 AM	1	0	0	0	0	1	0	0	0	0	0	0	0	3	0	0	0	0	3	4
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	1	0	0	0	0	1	0	0	0	0	0	0	0	4	0	0	0	0	4	5
Grand Total	4	0	0	0	0	4	0	0	0	0	0	0	0	6	0	0	0	0	6	10
Approach %	100.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0	0.0			
Total %	40.0	0.0	0.0	0.0	0.0	40.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	60.0	0.0	0.0	0.0	60.0		
Exiting Leg Total	6						0						4						10	

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:30 AM	Massachusetts Avenue						Pine Court						Massachusetts Avenue						Total	
	from East						from South						from West							
	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	U-Turn	CW-NB	CW-SB	Total		
7:30 AM	3	0	0	0	0	3	0	0	0	0	0	0	0	2	0	0	0	0	2	5
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1
Total Volume	3	0	0	0	0	3	0	0	0	0	0	0	0	3	0	0	0	0	3	6
% Approach Total	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0		
PHF	0.250	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.375	0.000	0.000	0.000	0.375		0.300
Entering Leg	3	0	0	0	0	3	0	0	0	0	0	0	0	3	0	0	0	0	3	6
Exiting Leg						3						0							3	6
Total						6						0							6	12



PDI File #: **207450 D**  
 Location: **S: Pine Court**  
 Location: **E: Massachusetts Avenue W: Massachusetts Avenue**  
 City, State: **Arlington, MA**  
 Client: **Nitsch Eng/B.Zimolka**  
 Site Code: **TBD**  
 Count Date: **Tuesday, February 4, 2020**  
 Start Time: **7:00 AM**  
 End Time: **9:00 AM**  
 Class:



### Pedestrians

	Massachusetts Avenue						Pine Court						Massachusetts Avenue						Total	
	from East						from South						from West							
	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	U-Turn	CW-NB	CW-SB	Total		
7:00 AM	0	0	0	0	0	0	0	0	0	0	3	1	4	0	0	0	0	0	0	4
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	4	4	0	0	0	0	0	0	4
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1
Total	0	0	0	0	0	0	0	0	0	0	3	7	10	0	0	0	0	0	0	10
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	0	0	0	2
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	3	3	0	0	0	0	0	0	3
Total	0	0	0	0	0	0	0	0	0	0	1	4	5	0	0	0	0	0	0	5
Grand Total	0	0	0	0	0	0	0	0	0	0	4	11	15	0	0	0	0	0	0	15
Approach %	0	0	0	0	0	0	0	0	0	0	26.667	73.333		0	0	0	0	0		
Total %	0	0	0	0	0	0	0	0	0	0	26.667	73.333	100	0	0	0	0	0	0	
Exiting Leg Total	0						15						0						15	

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:00 AM	Massachusetts Avenue						Pine Court						Massachusetts Avenue						Total
	from East						from South						from West						
	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	U-Turn	CW-NB	CW-SB	Total	
7:00 AM	0	0	0	0	0	0	0	0	0	3	1	4	0	0	0	0	0	0	4
7:15 AM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1
7:30 AM	0	0	0	0	0	0	0	0	0	0	4	4	0	0	0	0	0	0	4
7:45 AM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1
Total Volume	0	0	0	0	0	0	0	0	0	3	7	10	0	0	0	0	0	0	10
% Approach Total	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	30.0	70.0		0.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.438	0.625	0.000	0.000	0.000	0.000	0.000	0.000	0.625
Entering Leg	0	0	0	0	0	0	0	0	0	3	7	10	0	0	0	0	0	0	10
Exiting Leg	0						10						0						10
Total	0						20						0						20



PDI File #: **207450 DD**  
 Location: **S: Pine Court**  
 Location: **E: Massachusetts Avenue W: Massachusetts Avenue**  
 City, State: **Arlington, MA**  
 Client: **Nitsch Eng/B.Zimolka**  
 Site Code: **TBD**  
 Count Date: **Tuesday, February 4, 2020**  
 Start Time: **4:00 PM**  
 End Time: **6:00 PM**  
 Class:



### Cars and Heavy Vehicles (Combined)

	Massachusetts Avenue				Pine Court				Massachusetts Avenue				Total
	from East				from South				from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
4:00 PM	118	0	0	118	0	0	0	0	1	127	0	128	246
4:15 PM	99	1	0	100	0	0	0	0	0	121	0	121	221
4:30 PM	111	0	0	111	0	1	0	1	0	128	0	128	240
4:45 PM	117	0	1	118	0	0	0	0	0	147	0	147	265
Total	445	1	1	447	0	1	0	1	1	523	0	524	972
5:00 PM	122	1	0	123	1	0	0	1	1	130	0	131	255
5:15 PM	99	0	0	99	0	0	0	0	1	151	0	152	251
5:30 PM	99	1	0	100	0	0	0	0	1	160	0	161	261
5:45 PM	123	0	0	123	0	1	0	1	0	147	0	147	271
Total	443	2	0	445	1	1	0	2	3	588	0	591	1038
Grand Total	888	3	1	892	1	2	0	3	4	1111	0	1115	2010
Approach %	99.6	0.3	0.1		33.3	66.7	0.0		0.4	99.6	0.0		
Total %	44.2	0.1	0.0	44.4	0.0	0.1	0.0	0.1	0.2	55.3	0.0	55.5	
Exiting Leg Total				1113				7				890	2010
Cars	864	3	1	868	1	2	0	3	4	1087	0	1091	1962
% Cars	97.3	100.0	100.0	97.3	100.0	100.0	0.0	100.0	100.0	97.8	0.0	97.8	97.6
Exiting Leg Total				1089				7				866	1962
Heavy Vehicles	24	0	0	24	0	0	0	0	0	24	0	24	48
% Heavy Vehicles	2.7	0.0	0.0	2.7	0.0	0.0	0.0	0.0	0.0	2.2	0.0	2.2	2.4
Exiting Leg Total				24				0				24	48

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

5:00 PM	Massachusetts Avenue					Pine Court				Massachusetts Avenue					Total	
	from East					from South				from West						
	Thru	Left	U-Turn	Total		Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total			
5:00 PM	122	1	0	123		1	0	0	1	1	130	0	131	255		
5:15 PM	99	0	0	99		0	0	0	0	1	151	0	152	251		
5:30 PM	99	1	0	100		0	0	0	0	1	160	0	161	261		
5:45 PM	123	0	0	123		0	1	0	1	0	147	0	147	271		
Total Volume	443	2	0	445		1	1	0	2	3	588	0	591	1038		
% Approach Total	99.6	0.4	0.0			50.0	50.0	0.0		0.5	99.5	0.0				
PHF	0.900	0.500	0.000	0.904		0.250	0.250	0.000	0.500	0.750	0.919	0.000	0.918	0.958		
Cars	429	2	0	431		1	1	0	2	3	577	0	580	1013		
Cars %	96.8	100.0	0.0	96.9		100.0	100.0	0.0	100.0	100.0	98.1	0.0	98.1	97.6		
Heavy Vehicles	14	0	0	14		0	0	0	0	0	11	0	11	25		
Heavy Vehicles %	3.2	0.0	0.0	3.1		0.0	0.0	0.0	0.0	0.0	1.9	0.0	1.9	2.4		
Cars Enter Leg	429	2	0	431		1	1	0	2	3	577	0	580	1013		
Heavy Enter Leg	14	0	0	14		0	0	0	0	0	11	0	11	25		
Total Entering Leg	443	2	0	445		1	1	0	2	3	588	0	591	1038		
Cars Exiting Leg					578					5					430	1013
Heavy Exiting Leg					11					0					14	25
Total Exiting Leg					589					5					444	1038



PDI File #: **207450 DD**  
 Location: **S: Pine Court**  
 Location: **E: Massachusetts Avenue W: Massachusetts Avenue**  
 City, State: **Arlington, MA**  
 Client: **Nitsch Eng/B.Zimolka**  
 Site Code: **TBD**  
 Count Date: **Tuesday, February 4, 2020**  
 Start Time: **4:00 PM**  
 End Time: **6:00 PM**



Class: **Cars**

	Massachusetts Avenue				Pine Court				Massachusetts Avenue				Total
	from East				from South				from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
4:00 PM	115	0	0	115	0	0	0	0	1	123	0	124	239
4:15 PM	97	1	0	98	0	0	0	0	0	118	0	118	216
4:30 PM	108	0	0	108	0	1	0	1	0	126	0	126	235
4:45 PM	115	0	1	116	0	0	0	0	0	143	0	143	259
Total	435	1	1	437	0	1	0	1	1	510	0	511	949
5:00 PM	114	1	0	115	1	0	0	1	1	127	0	128	244
5:15 PM	98	0	0	98	0	0	0	0	1	148	0	149	247
5:30 PM	98	1	0	99	0	0	0	0	1	157	0	158	257
5:45 PM	119	0	0	119	0	1	0	1	0	145	0	145	265
Total	429	2	0	431	1	1	0	2	3	577	0	580	1013
Grand Total	864	3	1	868	1	2	0	3	4	1087	0	1091	1962
Approach %	99.5	0.3	0.1		33.3	66.7	0.0		0.4	99.6	0.0		
Total %	44.0	0.2	0.1	44.2	0.1	0.1	0.0	0.2	0.2	55.4	0.0	55.6	
Exiting Leg Total	1089				7				866				1962

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

5:00 PM	Massachusetts Avenue				Pine Court				Massachusetts Avenue				Total
	from East				from South				from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
5:00 PM	114	1	0	115	1	0	0	1	1	127	0	128	244
5:15 PM	98	0	0	98	0	0	0	0	1	148	0	149	247
5:30 PM	98	1	0	99	0	0	0	0	1	157	0	158	257
5:45 PM	119	0	0	119	0	1	0	1	0	145	0	145	265
Total Volume	429	2	0	431	1	1	0	2	3	577	0	580	1013
% Approach Total	99.5	0.5	0.0		50.0	50.0	0.0		0.5	99.5	0.0		
PHF	0.901	0.500	0.000	0.905	0.250	0.250	0.000	0.500	0.750	0.919	0.000	0.918	0.956
Entering Leg	429	2	0	431	1	1	0	2	3	577	0	580	1013
Exiting Leg				578				5				430	1013
Total				1009				7				1010	2026



PDI File #: **207450 DD**  
 Location: **S: Pine Court**  
 Location: **E: Massachusetts Avenue W: Massachusetts Avenue**  
 City, State: **Arlington, MA**  
 Client: **Nitsch Eng/B.Zimolka**  
 Site Code: **TBD**  
 Count Date: **Tuesday, February 4, 2020**  
 Start Time: **4:00 PM**  
 End Time: **6:00 PM**



Class: **Heavy Vehicles-Combined (Buses, Single-Unit Trucks, Articulated Trucks)**

	Massachusetts Avenue				Pine Court				Massachusetts Avenue				Total
	from East				from South				from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
4:00 PM	3	0	0	3	0	0	0	0	0	4	0	4	7
4:15 PM	2	0	0	2	0	0	0	0	0	3	0	3	5
4:30 PM	3	0	0	3	0	0	0	0	0	2	0	2	5
4:45 PM	2	0	0	2	0	0	0	0	0	4	0	4	6
Total	10	0	0	10	0	0	0	0	0	13	0	13	23
5:00 PM	8	0	0	8	0	0	0	0	0	3	0	3	11
5:15 PM	1	0	0	1	0	0	0	0	0	3	0	3	4
5:30 PM	1	0	0	1	0	0	0	0	0	3	0	3	4
5:45 PM	4	0	0	4	0	0	0	0	0	2	0	2	6
Total	14	0	0	14	0	0	0	0	0	11	0	11	25
Grand Total	24	0	0	24	0	0	0	0	0	24	0	24	48
Approach %	100.0	0.0	0.0		0.0	0.0	0.0		0.0	100.0	0.0		
Total %	50.0	0.0	0.0	50.0	0.0	0.0	0.0	0.0	0.0	50.0	0.0	50.0	
Exiting Leg Total	24				0				24				48
Buses	16	0	0	16	0	0	0	0	0	18	0	18	34
% Buses	66.7	0.0	0.0	66.7	0.0	0.0	0.0	0.0	0.0	75.0	0.0	75.0	70.8
Exiting Leg Total	18				0				16				34
Single-Unit Trucks	6	0	0	6	0	0	0	0	0	5	0	5	11
% Single-Unit	25.0	0.0	0.0	25.0	0.0	0.0	0.0	0.0	0.0	20.8	0.0	20.8	22.9
Exiting Leg Total	5				0				6				11
Articulated Trucks	2	0	0	2	0	0	0	0	0	1	0	1	3
% Articulated	8.3	0.0	0.0	8.3	0.0	0.0	0.0	0.0	0.0	4.2	0.0	4.2	6.3
Exiting Leg Total	1				0				2				3

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:15 PM	Massachusetts Avenue				Pine Court				Massachusetts Avenue				Total
	from East				from South				from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
4:15 PM	2	0	0	2	0	0	0	0	0	3	0	3	5
4:30 PM	3	0	0	3	0	0	0	0	0	2	0	2	5
4:45 PM	2	0	0	2	0	0	0	0	0	4	0	4	6
5:00 PM	8	0	0	8	0	0	0	0	0	3	0	3	11
Total Volume	15	0	0	15	0	0	0	0	0	12	0	12	27
% Approach Total	100.0	0.0	0.0		0.0	0.0	0.0		0.0	100.0	0.0		
PHF	0.469	0.000	0.000	0.469	0.000	0.000	0.000	0.000	0.000	0.750	0.000	0.750	0.614
Buses	10	0	0	10	0	0	0	0	0	8	0	8	18
Buses %	66.7	0.0	0.0	66.7	0.0	0.0	0.0	0.0	0.0	66.7	0.0	66.7	66.7
Single-Unit Trucks	3	0	0	3	0	0	0	0	0	3	0	3	6
Single-Unit %	20.0	0.0	0.0	20.0	0.0	0.0	0.0	0.0	0.0	25.0	0.0	25.0	22.2
Articulated Trucks	2	0	0	2	0	0	0	0	0	1	0	1	3
Articulated %	13.3	0.0	0.0	13.3	0.0	0.0	0.0	0.0	0.0	8.3	0.0	8.3	11.1
Buses	10	0	0	10	0	0	0	0	0	8	0	8	18
Single-Unit Trucks	3	0	0	3	0	0	0	0	0	3	0	3	6
Articulated Trucks	2	0	0	2	0	0	0	0	0	1	0	1	3
Total Entering Leg	15	0	0	15	0	0	0	0	0	12	0	12	27
Buses				8				0				10	18
Single-Unit Trucks				3				0				3	6
Articulated Trucks				1				0				2	3
Total Exiting Leg				12				0				15	27



PDI File #: **207450 DD**  
 Location: **S: Pine Court**  
 Location: **E: Massachusetts Avenue W: Massachusetts Avenue**  
 City, State: **Arlington, MA**  
 Client: **Nitsch Eng/B.Zimolka**  
 Site Code: **TBD**  
 Count Date: **Tuesday, February 4, 2020**  
 Start Time: **4:00 PM**  
 End Time: **6:00 PM**  
 Class:



### Buses

	Massachusetts Avenue					Pine Court					Massachusetts Avenue					Total
	from East					from South					from West					
	Thru	Left	U-Turn	Total		Right	Left	U-Turn	Total		Right	Thru	U-Turn	Total		
4:00 PM	2	0	0	0	2	0	0	0	0	0	0	3	0	0	3	5
4:15 PM	2	0	0	0	2	0	0	0	0	0	0	3	0	0	3	5
4:30 PM	2	0	0	0	2	0	0	0	0	0	0	1	0	0	1	3
4:45 PM	2	0	0	0	2	0	0	0	0	0	0	2	0	0	2	4
Total	8	0	0	0	8	0	0	0	0	0	0	9	0	0	9	17
5:00 PM	4	0	0	0	4	0	0	0	0	0	0	2	0	0	2	6
5:15 PM	1	0	0	0	1	0	0	0	0	0	0	3	0	0	3	4
5:30 PM	1	0	0	0	1	0	0	0	0	0	0	2	0	0	2	3
5:45 PM	2	0	0	0	2	0	0	0	0	0	0	2	0	0	2	4
Total	8	0	0	0	8	0	0	0	0	0	0	9	0	0	9	17
Grand Total	16	0	0	0	16	0	0	0	0	0	0	18	0	0	18	34
Approach %	100.0	0.0	0.0			0.0	0.0	0.0			0.0	100.0	0.0			
Total %	47.1	0.0	0.0	0.0	47.1	0.0	0.0	0.0	0.0	0.0	0.0	52.9	0.0	0.0	52.9	
Exiting Leg Total	18					0					16					34

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:15 PM	Massachusetts Avenue				Pine Court				Massachusetts Avenue				Total
	from East				from South				from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
4:15 PM	2	0	0	2	0	0	0	0	0	3	0	3	5
4:30 PM	2	0	0	2	0	0	0	0	0	1	0	1	3
4:45 PM	2	0	0	2	0	0	0	0	0	2	0	2	4
5:00 PM	4	0	0	4	0	0	0	0	0	2	0	2	6
Total Volume	10	0	0	10	0	0	0	0	0	8	0	8	18
% Approach Total	100.0	0.0	0.0		0.0	0.0	0.0		0.0	100.0	0.0		
PHF	0.625	0.000	0.000	0.625	0.000	0.000	0.000	0.000	0.000	0.667	0.000	0.667	0.750
Entering Leg	10	0	0	10	0	0	0	0	0	8	0	8	18
Exiting Leg				8				0				10	18
Total				18				0				18	36



PDI File #: **207450 DD**  
 Location: **S: Pine Court**  
 Location: **E: Massachusetts Avenue W: Massachusetts Avenue**  
 City, State: **Arlington, MA**  
 Client: **Nitsch Eng/B.Zimolka**  
 Site Code: **TBD**  
 Count Date: **Tuesday, February 4, 2020**  
 Start Time: **4:00 PM**  
 End Time: **6:00 PM**



Class:

### Single-Unit Trucks

	Massachusetts Avenue					Pine Court					Massachusetts Avenue					Total
	from East					from South					from West					
	Thru	Left	U-Turn	Total		Right	Left	U-Turn	Total		Right	Thru	U-Turn	Total		
4:00 PM	1	0	0	0	1	0	0	0	0	0	0	1	0	0	1	2
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	2
Total	2	0	0	0	2	0	0	0	0	0	0	3	0	0	3	5
5:00 PM	2	0	0	0	2	0	0	0	0	0	0	1	0	0	1	3
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
5:45 PM	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	2
Total	4	0	0	0	4	0	0	0	0	0	0	2	0	0	2	6
Grand Total	6	0	0	0	6	0	0	0	0	0	0	5	0	0	5	11
Approach %	100.0	0.0	0.0			0.0	0.0	0.0			0.0	100.0	0.0			
Total %	54.5	0.0	0.0	54.5		0.0	0.0	0.0	0.0		0.0	45.5	0.0	45.5		
Exiting Leg Total	5					0					6					11

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:15 PM	Massachusetts Avenue				Pine Court				Massachusetts Avenue				Total
	from East				from South				from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	1	0	0	1	0	0	0	0	0	0	0	0	1
4:45 PM	0	0	0	0	0	0	0	0	0	2	0	2	2
5:00 PM	2	0	0	2	0	0	0	0	0	1	0	1	3
Total Volume	3	0	0	3	0	0	0	0	0	3	0	3	6
% Approach Total	100.0	0.0	0.0		0.0	0.0	0.0		0.0	100.0	0.0		
PHF	0.375	0.000	0.000	0.375	0.000	0.000	0.000	0.000	0.000	0.375	0.000	0.375	0.500
Entering Leg	3	0	0	3	0	0	0	0	0	3	0	3	6
Exiting Leg				3								3	6
Total				6				0				6	12



PDI File #: **207450 DD**  
 Location: **S: Pine Court**  
 Location: **E: Massachusetts Avenue W: Massachusetts Avenue**  
 City, State: **Arlington, MA**  
 Client: **Nitsch Eng/B.Zimolka**  
 Site Code: **TBD**  
 Count Date: **Tuesday, February 4, 2020**  
 Start Time: **4:00 PM**  
 End Time: **6:00 PM**  
 Class:



### Articulated Trucks

	Massachusetts Avenue				Pine Court				Massachusetts Avenue				Total
	from East				from South				from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	1	0	1	1
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	1	0	1	1
5:00 PM	2	0	0	2	0	0	0	0	0	0	0	0	2
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	2	0	0	2	0	0	0	0	0	0	0	0	2
Grand Total	2	0	0	2	0	0	0	0	0	1	0	1	3
Approach %	100.0	0.0	0.0		0.0	0.0	0.0		0.0	100.0	0.0		
Total %	66.7	0.0	0.0	66.7	0.0	0.0	0.0	0.0	0.0	33.3	0.0	33.3	
Exiting Leg Total	1				0				2				3

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:15 PM	Massachusetts Avenue				Pine Court				Massachusetts Avenue				Total
	from East				from South				from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	1	0	1	1
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	2	0	0	2	0	0	0	0	0	0	0	0	2
Total Volume	2	0	0	2	0	0	0	0	0	1	0	1	3
% Approach Total	100.0	0.0	0.0		0.0	0.0	0.0		0.0	100.0	0.0		
PHF	0.250	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.250	0.375
Entering Leg	2	0	0	2	0	0	0	0	0	1	0	1	3
Exiting Leg				1				0				2	3
Total				3				0				3	6



PDI File #: 207450 DD  
 Location: S: Pine Court  
 Location: E: Massachusetts Avenue W: Massachusetts Avenue  
 City, State: Arlington, MA  
 Client: Nitsch Eng/B.Zimolka  
 Site Code: TBD  
 Count Date: Tuesday, February 4, 2020  
 Start Time: 4:00 PM  
 End Time: 6:00 PM



Class: Bicycles (on Roadway and Crosswalks)

	Massachusetts Avenue						Pine Court						Massachusetts Avenue						Total
	from East						from South						from West						
	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	U-Turn	CW-NB	CW-SB	Total	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	1	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	1	2
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
Total	1	0	0	0	0	1	0	0	0	0	0	0	0	3	0	0	0	3	4
5:00 PM	2	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	1	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	1	2
5:45 PM	4	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	4
Total	7	0	0	0	0	7	0	0	0	0	0	0	0	1	0	0	0	1	8
Grand Total	8	0	0	0	0	8	0	0	0	0	0	0	0	4	0	0	0	4	12
Approach %	100.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0	0.0		
Total %	66.7	0.0	0.0	0.0	0.0	66.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	33.3	0.0	0.0	0.0	33.3	
Exiting Leg Total	4						0						8						12

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

5:00 PM	Massachusetts Avenue						Pine Court						Massachusetts Avenue						Total	
	from East						from South						from West							
	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	U-Turn	CW-NB	CW-SB	Total		
5:00 PM	2	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	1	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	1	2
5:45 PM	4	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Total Volume	7	0	0	0	0	7	0	0	0	0	0	0	0	1	0	0	0	0	1	8
% Approach Total	100.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0	0.0			
PHF	0.438	0.000	0.000	0.000	0.000	0.438	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.250		0.500
Entering Leg	7	0	0	0	0	7	0	0	0	0	0	0	0	1	0	0	0	1		8
Exiting Leg	1						0						7						8	
Total	8						0						8						16	



PDI File #: **207450 DD**  
 Location: **S: Pine Court**  
 Location: **E: Massachusetts Avenue W: Massachusetts Avenue**  
 City, State: **Arlington, MA**  
 Client: **Nitsch Eng/B.Zimolka**  
 Site Code: **TBD**



Count Date: **Tuesday, February 4, 2020**

Start Time: **4:00 PM**

End Time: **6:00 PM**

Class:

### Pedestrians

	Massachusetts Avenue							Pine Court							Massachusetts Avenue							Total
	from East							from South							from West							
	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	U-Turn	CW-NB	CW-SB	Total				
4:00 PM	0	0	0	0	0	0	0	0	0	0	1	3	4	0	0	0	0	0	0	0	4	
4:15 PM	0	0	0	0	0	0	0	0	0	0	2	1	3	0	0	0	0	0	0	0	3	
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	0	0	0	0	0	0	0	0	0	0	3	4	7	0	0	0	0	0	0	0	7	
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	2	
5:15 PM	0	0	0	0	0	0	0	0	0	0	3	1	4	0	0	0	0	0	0	0	4	
5:30 PM	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	1	
5:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	1	
Total	0	0	0	0	0	0	0	0	0	0	5	3	8	0	0	0	0	0	0	0	8	
Grand Total	0	0	0	0	0	0	0	0	0	0	8	7	15	0	0	0	0	0	0	0	15	
Approach %	0	0	0	0	0	0	0	0	0	0	53.333	46.667		0	0	0	0	0	0			
Total %	0	0	0	0	0	0	0	0	0	0	53.333	46.667	100	0	0	0	0	0	0	0		
Exiting Leg Total	0							15							0							15

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

5:00 PM	Massachusetts Avenue						Pine Court						Massachusetts Avenue						Total
	from East						from South						from West						
	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	U-Turn	CW-NB	CW-SB	Total	
5:00 PM	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	2
5:15 PM	0	0	0	0	0	0	0	0	0	3	1	4	0	0	0	0	0	0	4
5:30 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1
5:45 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1
Total Volume	0	0	0	0	0	0	0	0	0	5	3	8	0	0	0	0	0	0	8
% Approach Total	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	62.5	37.5		0.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.417	0.375	0.500	0.000	0.000	0.000	0.000	0.000	0.000	0.500
Entering Leg	0	0	0	0	0	0	0	0	0	5	3	8	0	0	0	0	0	0	8
Exiting Leg	0						8						0						8
Total	0						16						0						16



PDI File #: **207450 E**  
 Location: **N: Quinn Road (Mirak Mill Park East Driveway)**  
 Location: **E: Massachusetts Avenue W: Massachusetts Avenue**  
 City, State: **Arlington, MA**  
 Client: **Nitsch Eng/B.Zimolka**  
 Site Code: **TBD**  
 Count Date: **Tuesday, February 4, 2020**  
 Start Time: **7:00 AM**  
 End Time: **9:00 AM**  
 Class: **Cars and Heavy Vehicles (Combined)**



	Quinn Road (Mirak Mill Park East Driveway)				Massachusetts Avenue				Massachusetts Avenue				Total
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
7:00 AM	0	0	0	0	1	94	0	95	110	4	0	114	209
7:15 AM	0	0	0	0	4	81	0	85	109	5	0	114	199
7:30 AM	1	0	0	1	2	135	0	137	124	2	0	126	264
7:45 AM	2	1	0	3	2	146	0	148	131	10	0	141	292
Total	3	1	0	4	9	456	0	465	474	21	0	495	964
8:00 AM	2	0	0	2	5	148	0	153	99	10	0	109	264
8:15 AM	2	2	0	4	1	102	0	103	98	5	0	103	210
8:30 AM	1	3	0	4	3	107	0	110	117	1	0	118	232
8:45 AM	2	3	0	5	4	127	0	131	109	3	0	112	248
Total	7	8	0	15	13	484	0	497	423	19	0	442	954
Grand Total	10	9	0	19	22	940	0	962	897	40	0	937	1918
Approach %	52.6	47.4	0.0		2.3	97.7	0.0		95.7	4.3	0.0		
Total %	0.5	0.5	0.0	1.0	1.1	49.0	0.0	50.2	46.8	2.1	0.0	48.9	
Exiting Leg Total	62				906				950				1918
Cars	9	9	0	18	21	880	0	901	829	38	0	867	1786
% Cars	90.0	100.0	0.0	94.7	95.5	93.6	0.0	93.7	92.4	95.0	0.0	92.5	93.1
Exiting Leg Total	59				838				889				1786
Heavy Vehicles	1	0	0	1	1	60	0	61	68	2	0	70	132
% Heavy Vehicles	10.0	0.0	0.0	5.3	4.5	6.4	0.0	6.3	7.6	5.0	0.0	7.5	6.9
Exiting Leg Total	3				68				61				132

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:30 AM	Quinn Road (Mirak Mill Park East Driveway)					Massachusetts Avenue				Massachusetts Avenue				Total
	from North					from East				from West				
	Right	Left	U-Turn	Total		Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
7:30 AM	1	0	0	1		2	135	0	137	124	2	0	126	264
7:45 AM	2	1	0	3		2	146	0	148	131	10	0	141	292
8:00 AM	2	0	0	2		5	148	0	153	99	10	0	109	264
8:15 AM	2	2	0	4		1	102	0	103	98	5	0	103	210
Total Volume	7	3	0	10		10	531	0	541	452	27	0	479	1030
% Approach Total	70.0	30.0	0.0			1.8	98.2	0.0		94.4	5.6	0.0		
PHF	0.875	0.375	0.000	0.625		0.500	0.897	0.000	0.884	0.863	0.675	0.000	0.849	0.882
Cars	6	3	0	9		10	505	0	515	415	26	0	441	965
Cars %	85.7	100.0	0.0	90.0		100.0	95.1	0.0	95.2	91.8	96.3	0.0	92.1	93.7
Heavy Vehicles	1	0	0	1		0	26	0	26	37	1	0	38	65
Heavy Vehicles %	14.3	0.0	0.0	10.0		0.0	4.9	0.0	4.8	8.2	3.7	0.0	7.9	6.3
Cars Enter Leg	6	3	0	9		10	505	0	515	415	26	0	441	965
Heavy Enter Leg	1	0	0	1		0	26	0	26	37	1	0	38	65
Total Entering Leg	7	3	0	10		10	531	0	541	452	27	0	479	1030
Cars Exiting Leg				36					418				511	965
Heavy Exiting Leg				1					37				27	65
Total Exiting Leg				37					455				538	1030



PDI File #: **207450 E**  
 Location: **N: Quinn Road (Mirak Mill Park East Driveway)**  
 Location: **E: Massachusetts Avenue W: Massachusetts Avenue**  
 City, State: **Arlington, MA**  
 Client: **Nitsch Eng/B.Zimolka**  
 Site Code: **TBD**  
 Count Date: **Tuesday, February 4, 2020**  
 Start Time: **7:00 AM**  
 End Time: **9:00 AM**  
 Class:



### Cars

	Quinn Road (Mirak Mill Park East Driveway)				Massachusetts Avenue				Massachusetts Avenue				Total
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
7:00 AM	0	0	0	0	1	83	0	84	98	3	0	101	185
7:15 AM	0	0	0	0	3	74	0	77	103	5	0	108	185
7:30 AM	0	0	0	0	2	127	0	129	114	2	0	116	245
7:45 AM	2	1	0	3	2	140	0	142	121	10	0	131	276
Total	2	1	0	3	8	424	0	432	436	20	0	456	891
8:00 AM	2	0	0	2	5	141	0	146	92	10	0	102	250
8:15 AM	2	2	0	4	1	97	0	98	88	4	0	92	194
8:30 AM	1	3	0	4	3	98	0	101	111	1	0	112	217
8:45 AM	2	3	0	5	4	120	0	124	102	3	0	105	234
Total	7	8	0	15	13	456	0	469	393	18	0	411	895
Grand Total	9	9	0	18	21	880	0	901	829	38	0	867	1786
Approach %	50.0	50.0	0.0		2.3	97.7	0.0		95.6	4.4	0.0		
Total %	0.5	0.5	0.0	1.0	1.2	49.3	0.0	50.4	46.4	2.1	0.0	48.5	
Exiting Leg Total	59				838				889				1786

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:30 AM	Quinn Road (Mirak Mill Park East Driveway)				Massachusetts Avenue				Massachusetts Avenue				Total
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
7:30 AM	0	0	0	0	2	127	0	129	114	2	0	116	245
7:45 AM	2	1	0	3	2	140	0	142	121	10	0	131	276
8:00 AM	2	0	0	2	5	141	0	146	92	10	0	102	250
8:15 AM	2	2	0	4	1	97	0	98	88	4	0	92	194
Total Volume	6	3	0	9	10	505	0	515	415	26	0	441	965
% Approach Total	66.7	33.3	0.0		1.9	98.1	0.0		94.1	5.9	0.0		
PHF	0.750	0.375	0.000	0.563	0.500	0.895	0.000	0.882	0.857	0.650	0.000	0.842	0.874
Entering Leg	6	3	0	9	10	505	0	515	415	26	0	441	965
Exiting Leg				36				418				511	965
Total				45				933				952	1930



PDI File #: **207450 E**  
 Location: **N: Quinn Road (Mirak Mill Park East Driveway)**  
 Location: **E: Massachusetts Avenue W: Massachusetts Avenue**  
 City, State: **Arlington, MA**  
 Client: **Nitsch Eng/B.Zimolka**  
 Site Code: **TBD**  
 Count Date: **Tuesday, February 4, 2020**  
 Start Time: **7:00 AM**  
 End Time: **9:00 AM**  
 Class: **Heavy Vehicles-Combined (Buses, Single-Unit Trucks, Articulated Trucks)**



	Quinn Road (Mirak Mill Park East Driveway)				Massachusetts Avenue				Massachusetts Avenue				Total
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
7:00 AM	0	0	0	0	0	11	0	11	12	1	0	13	24
7:15 AM	0	0	0	0	1	7	0	8	6	0	0	6	14
7:30 AM	1	0	0	1	0	8	0	8	10	0	0	10	19
7:45 AM	0	0	0	0	0	6	0	6	10	0	0	10	16
Total	1	0	0	1	1	32	0	33	38	1	0	39	73
8:00 AM	0	0	0	0	0	7	0	7	7	0	0	7	14
8:15 AM	0	0	0	0	0	5	0	5	10	1	0	11	16
8:30 AM	0	0	0	0	0	9	0	9	6	0	0	6	15
8:45 AM	0	0	0	0	0	7	0	7	7	0	0	7	14
Total	0	0	0	0	0	28	0	28	30	1	0	31	59
Grand Total	1	0	0	1	1	60	0	61	68	2	0	70	132
Approach %	100.0	0.0	0.0		1.6	98.4	0.0		97.1	2.9	0.0		
Total %	0.8	0.0	0.0	0.8	0.8	45.5	0.0	46.2	51.5	1.5	0.0	53.0	
Exiting Leg Total	3				68				61				132
Buses	0	0	0	0	0	24	0	24	21	0	0	21	45
% Buses	0.0	0.0	0.0	0.0	0.0	40.0	0.0	39.3	30.9	0.0	0.0	30.0	34.1
Exiting Leg Total	0				21				24				45
Single-Unit Trucks	1	0	0	1	1	34	0	35	41	2	0	43	79
% Single-Unit	100.0	0.0	0.0	100.0	100.0	56.7	0.0	57.4	60.3	100.0	0.0	61.4	59.8
Exiting Leg Total	3				41				35				79
Articulated Trucks	0	0	0	0	0	2	0	2	6	0	0	6	8
% Articulated	0.0	0.0	0.0	0.0	0.0	3.3	0.0	3.3	8.8	0.0	0.0	8.6	6.1
Exiting Leg Total	0				6				2				8

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:00 AM	Quinn Road (Mirak Mill Park East Driveway)				Massachusetts Avenue				Massachusetts Avenue				Total
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
7:00 AM	0	0	0	0	0	11	0	11	12	1	0	13	24
7:15 AM	0	0	0	0	1	7	0	8	6	0	0	6	14
7:30 AM	1	0	0	1	0	8	0	8	10	0	0	10	19
7:45 AM	0	0	0	0	0	6	0	6	10	0	0	10	16
Total Volume	1	0	0	1	1	32	0	33	38	1	0	39	73
% Approach Total	100.0	0.0	0.0		3.0	97.0	0.0		97.4	2.6	0.0		
PHF	0.250	0.000	0.000	0.250	0.250	0.727	0.000	0.750	0.792	0.250	0.000	0.750	0.760
Buses	0	0	0	0	0	15	0	15	9	0	0	9	24
Buses %	0.0	0.0	0.0	0.0	0.0	46.9	0.0	45.5	23.7	0.0	0.0	23.1	32.9
Single-Unit Trucks	1	0	0	1	1	16	0	17	24	1	0	25	43
Single-Unit %	100.0	0.0	0.0	100.0	100.0	50.0	0.0	51.5	63.2	100.0	0.0	64.1	58.9
Articulated Trucks	0	0	0	0	0	1	0	1	5	0	0	5	6
Articulated %	0.0	0.0	0.0	0.0	0.0	3.1	0.0	3.0	13.2	0.0	0.0	12.8	8.2
Buses	0	0	0	0	0	15	0	15	9	0	0	9	24
Single-Unit Trucks	1	0	0	1	1	16	0	17	24	1	0	25	43
Articulated Trucks	0	0	0	0	0	1	0	1	5	0	0	5	6
Total Entering Leg	1	0	0	1	1	32	0	33	38	1	0	39	73
Buses				0				9				15	24
Single-Unit Trucks				2				24				17	43
Articulated Trucks				0				5				1	6
Total Exiting Leg				2				38				33	73



PDI File #: **207450 E**  
 Location: **N: Quinn Road (Mirak Mill Park East Driveway)**  
 Location: **E: Massachusetts Avenue W: Massachusetts Avenue**  
 City, State: **Arlington, MA**  
 Client: **Nitsch Eng/B.Zimolka**  
 Site Code: **TBD**  
 Count Date: **Tuesday, February 4, 2020**  
 Start Time: **7:00 AM**  
 End Time: **9:00 AM**  
 Class:



### Buses

	Quinn Road (Mirak Mill Park East Driveway)					Massachusetts Avenue				Massachusetts Avenue				Total
	from North					from East				from West				
	Right	Left	U-Turn	Total		Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
7:00 AM	0	0	0	0	0	0	5	0	5	4	0	0	4	9
7:15 AM	0	0	0	0	0	0	4	0	4	2	0	0	2	6
7:30 AM	0	0	0	0	0	0	3	0	3	0	0	0	0	3
7:45 AM	0	0	0	0	0	0	3	0	3	3	0	0	3	6
Total	0	0	0	0	0	0	15	0	15	9	0	0	9	24
8:00 AM	0	0	0	0	0	0	3	0	3	4	0	0	4	7
8:15 AM	0	0	0	0	0	0	0	0	0	4	0	0	4	4
8:30 AM	0	0	0	0	0	0	3	0	3	2	0	0	2	5
8:45 AM	0	0	0	0	0	0	3	0	3	2	0	0	2	5
Total	0	0	0	0	0	0	9	0	9	12	0	0	12	21
Grand Total	0	0	0	0	0	0	24	0	24	21	0	0	21	45
Approach %	0.0	0.0	0.0			0.0	100.0	0.0		100.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0		0.0	53.3	0.0	53.3	46.7	0.0	0.0	46.7	
Exiting Leg Total	0					21				24				45

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:00 AM	Quinn Road (Mirak Mill Park East Driveway)				Massachusetts Avenue				Massachusetts Avenue				Total
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
7:00 AM	0	0	0	0	0	5	0	5	4	0	0	4	9
7:15 AM	0	0	0	0	0	4	0	4	2	0	0	2	6
7:30 AM	0	0	0	0	0	3	0	3	0	0	0	0	3
7:45 AM	0	0	0	0	0	3	0	3	3	0	0	3	6
Total Volume	0	0	0	0	0	15	0	15	9	0	0	9	24
% Approach Total	0.0	0.0	0.0		0.0	100.0	0.0		100.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.750	0.000	0.750	0.563	0.000	0.000	0.563	0.667
Entering Leg	0	0	0	0	0	15	0	15	9	0	0	9	24
Exiting Leg				0				9				15	24
Total				0				24				24	48



PDI File #: **207450 E**  
 Location: **N: Quinn Road (Mirak Mill Park East Driveway)**  
 Location: **E: Massachusetts Avenue W: Massachusetts Avenue**  
 City, State: **Arlington, MA**  
 Client: **Nitsch Eng/B.Zimolka**  
 Site Code: **TBD**  
 Count Date: **Tuesday, February 4, 2020**  
 Start Time: **7:00 AM**  
 End Time: **9:00 AM**  
 Class:



### Single-Unit Trucks

	Quinn Road (Mirak Mill Park East Driveway)					Massachusetts Avenue				Massachusetts Avenue				Total
	from North					from East				from West				
	Right	Left	U-Turn	Total		Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
7:00 AM	0	0	0	0	0	0	6	0	6	6	1	0	7	13
7:15 AM	0	0	0	0	0	1	3	0	4	3	0	0	3	7
7:30 AM	1	0	0	1	0	0	5	0	5	9	0	0	9	15
7:45 AM	0	0	0	0	0	0	2	0	2	6	0	0	6	8
Total	1	0	0	1	1	1	16	0	17	24	1	0	25	43
8:00 AM	0	0	0	0	0	0	4	0	4	3	0	0	3	7
8:15 AM	0	0	0	0	0	0	4	0	4	5	1	0	6	10
8:30 AM	0	0	0	0	0	0	6	0	6	4	0	0	4	10
8:45 AM	0	0	0	0	0	0	4	0	4	5	0	0	5	9
Total	0	0	0	0	0	0	18	0	18	17	1	0	18	36
Grand Total	1	0	0	1	1	1	34	0	35	41	2	0	43	79
Approach %	100.0	0.0	0.0			2.9	97.1	0.0		95.3	4.7	0.0		
Total %	1.3	0.0	0.0	1.3		1.3	43.0	0.0	44.3	51.9	2.5	0.0	54.4	
Exiting Leg Total	3					41				35				79

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:00 AM	Quinn Road (Mirak Mill Park East Driveway)				Massachusetts Avenue				Massachusetts Avenue				Total
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
7:00 AM	0	0	0	0	0	6	0	6	6	1	0	7	13
7:15 AM	0	0	0	0	1	3	0	4	3	0	0	3	7
7:30 AM	1	0	0	1	0	5	0	5	9	0	0	9	15
7:45 AM	0	0	0	0	0	2	0	2	6	0	0	6	8
Total Volume	1	0	0	1	1	16	0	17	24	1	0	25	43
% Approach Total	100.0	0.0	0.0		5.9	94.1	0.0		96.0	4.0	0.0		
PHF	0.250	0.000	0.000	0.250	0.250	0.667	0.000	0.708	0.667	0.250	0.000	0.694	0.717
Entering Leg	1	0	0	1	1	16	0	17	24	1	0	25	43
Exiting Leg				2				24				17	43
Total				3				41				42	86



PDI File #: **207450 E**  
 Location: **N: Quinn Road (Mirak Mill Park East Driveway)**  
 Location: **E: Massachusetts Avenue W: Massachusetts Avenue**  
 City, State: **Arlington, MA**  
 Client: **Nitsch Eng/B.Zimolka**  
 Site Code: **TBD**  
 Count Date: **Tuesday, February 4, 2020**  
 Start Time: **7:00 AM**  
 End Time: **9:00 AM**  
 Class:



### Articulated Trucks

	Quinn Road (Mirak Mill Park East Driveway)				Massachusetts Avenue				Massachusetts Avenue				Total
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
7:00 AM	0	0	0	0	0	0	0	0	2	0	0	2	2
7:15 AM	0	0	0	0	0	0	0	0	1	0	0	1	1
7:30 AM	0	0	0	0	0	0	0	0	1	0	0	1	1
7:45 AM	0	0	0	0	0	1	0	1	1	0	0	1	2
Total	0	0	0	0	0	1	0	1	5	0	0	5	6
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	1	0	1	1	0	0	1	2
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	1	0	1	1	0	0	1	2
Grand Total	0	0	0	0	0	2	0	2	6	0	0	6	8
Approach %	0.0	0.0	0.0		0.0	100.0	0.0		100.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	25.0	0.0	25.0	75.0	0.0	0.0	75.0	
Exiting Leg Total	0				6				2				8

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:00 AM	Quinn Road (Mirak Mill Park East Driveway)				Massachusetts Avenue				Massachusetts Avenue				Total
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
7:00 AM	0	0	0	0	0	0	0	0	2	0	0	2	2
7:15 AM	0	0	0	0	0	0	0	0	1	0	0	1	1
7:30 AM	0	0	0	0	0	0	0	0	1	0	0	1	1
7:45 AM	0	0	0	0	0	1	0	1	1	0	0	1	2
Total Volume	0	0	0	0	0	1	0	1	5	0	0	5	6
% Approach Total	0.0	0.0	0.0		0.0	100.0	0.0		100.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.250	0.625	0.000	0.000	0.625	0.750
Entering Leg	0	0	0	0	0	1	0	1	5	0	0	5	6
Exiting Leg				0				5				1	6
Total				0				6				6	12



PDI File #: **207450 E**  
 Location: **N: Quinn Road (Mirak Mill Park East Driveway)**  
 Location: **E: Massachusetts Avenue W: Massachusetts Avenue**  
 City, State: **Arlington, MA**  
 Client: **Nitsch Eng/B.Zimolka**  
 Site Code: **TBD**



Count Date: **Tuesday, February 4, 2020**  
 Start Time: **7:00 AM**  
 End Time: **9:00 AM**

Class:

**Bicycles (on Roadway and Crosswalks)**

	Quinn Road (Mirak Mill Park East Driveway)						Massachusetts Avenue						Massachusetts Avenue						Total	
	from North						from East						from West							
	Right	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	U-Turn	CW-SB	CW-NB	Total	Thru	Left	U-Turn	CW-NB	CW-SB	Total		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	3	0	0	0	3	1	0	0	0	0	1	4
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	3	0	0	0	3	1	0	0	0	0	1	4
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1
8:30 AM	0	0	0	0	0	0	0	0	1	0	0	0	1	3	0	0	0	0	3	4
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	1	0	0	0	1	4	0	0	0	0	4	5
Grand Total	0	0	0	0	0	0	0	0	4	0	0	0	4	5	0	0	0	0	5	9
Approach %	0.0	0.0	0.0	0.0	0.0			0.0	100.0	0.0	0.0	0.0		100.0	0.0	0.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0		0.0	44.4	0.0	0.0	0.0	44.4	55.6	0.0	0.0	0.0	0.0	55.6	
Exiting Leg Total	0						5						4						9	

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:30 AM	Quinn Road (Mirak Mill Park East Driveway)							Massachusetts Avenue							Massachusetts Avenue							Total
	from North							from East							from West							
	Right	Left	U-Turn	CW-EB	CW-WB	Total		Right	Thru	U-Turn	CW-SB	CW-NB	Total	Thru	Left	U-Turn	CW-NB	CW-SB	Total			
7:30 AM	0	0	0	0	0	0	0	0	3	0	0	0	0	3	1	0	0	0	0	0	1	4
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1
Total Volume	0	0	0	0	0	0	0	0	3	0	0	0	0	3	2	0	0	0	0	0	2	5
% Approach Total	0.0	0.0	0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0	0.0			100.0	0.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000		0.000	0.250	0.000	0.000	0.000	0.250		0.500	0.000	0.000	0.000	0.000	0.500		0.313
Entering Leg	0	0	0	0	0	0	0	0	3	0	0	0	3	2	0	0	0	0	0	2	5	
Exiting Leg	0							2							3							5
Total	0							5							5							10



PDI File #: 207450 E  
 Location: N: Quinn Road (Mirak Mill Park East Driveway)  
 Location: E: Massachusetts Avenue W: Massachusetts Avenue  
 City, State: Arlington, MA  
 Client: Nitsch Eng/B.Zimolka  
 Site Code: TBD  
 Count Date: Tuesday, February 4, 2020  
 Start Time: 7:00 AM  
 End Time: 9:00 AM  
 Class:



### Pedestrians

	Quinn Road (Mirak Mill Park East Driveway)						Massachusetts Avenue						Massachusetts Avenue						Total	
	from North						from East						from West							
	Right	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	U-Turn	CW-SB	CW-NB	Total	Thru	Left	U-Turn	CW-NB	CW-SB	Total		
7:00 AM	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
7:15 AM	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2
7:30 AM	0	0	0	1	3	4	0	0	0	0	0	0	0	0	0	0	0	0	0	4
7:45 AM	0	0	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Total	0	0	0	7	3	10	0	0	0	0	0	0	0	0	0	0	0	0	0	10
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	1	0	1	0	0	0	1	0	1	0	0	0	0	0	0	0	2
8:30 AM	0	0	0	1	3	4	0	0	0	0	0	0	0	0	0	0	0	0	0	4
8:45 AM	0	0	0	2	1	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Total	0	0	0	4	4	8	0	0	0	1	0	1	0	0	0	0	0	0	0	9
Grand Total	0	0	0	11	7	18	0	0	0	1	0	1	0	0	0	0	0	0	0	19
Approach %	0	0	0	61.111	38.889		0	0	0	100	0		0	0	0	0	0			
Total %	0	0	0	57.895	36.842	94.737	0	0	0	5.2632	0	5.2632	0	0	0	0	0	0	0	
Exiting Leg Total	18						1						0						19	

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:00 AM	Quinn Road (Mirak Mill Park East Driveway)						Massachusetts Avenue						Massachusetts Avenue								
	from North						from East						from West								
	Right	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	U-Turn	CW-SB	CW-NB	Total	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total		
7:00 AM	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
7:15 AM	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2	
7:30 AM	0	0	0	1	3	4	0	0	0	0	0	0	0	0	0	0	0	0	0	4	
7:45 AM	0	0	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3	
Total Volume	0	0	0	7	3	10	0	0	0	0	0	0	0	0	0	0	0	0	0	10	
% Approach Total	0.0	0.0	0.0	70.0	30.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0				
PHF	0.000	0.000	0.000	0.583	0.250	0.625	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.625	
Entering Leg	0	0	0	7	3	10	0	0	0	0	0	0	0	0	0	0	0	0	0	10	
Exiting Leg	10						0						0						0		10
Total	20						0						0						0		20



PDI File #: **207450 EE**  
 Location: **N: Quinn Road (Mirak Mill Park East Driveway)**  
 Location: **E: Massachusetts Avenue W: Massachusetts Avenue**  
 City, State: **Arlington, MA**  
 Client: **Nitsch Eng/B.Zimolka**  
 Site Code: **TBD**  
 Count Date: **Tuesday, February 4, 2020**  
 Start Time: **4:00 PM**  
 End Time: **6:00 PM**  
 Class: **Cars and Heavy Vehicles (Combined)**



	Quinn Road (Mirak Mill Park East Driveway)				Massachusetts Avenue				Massachusetts Avenue				Total
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
4:00 PM	7	1	0	8	1	113	0	114	123	3	0	126	248
4:15 PM	1	3	0	4	1	96	0	97	118	2	0	120	221
4:30 PM	9	1	0	10	1	102	0	103	125	2	0	127	240
4:45 PM	3	1	0	4	0	112	0	112	145	3	0	148	264
Total	20	6	0	26	3	423	0	426	511	10	0	521	973
5:00 PM	10	6	0	16	1	114	0	115	130	2	0	132	263
5:15 PM	4	1	0	5	2	95	0	97	151	0	0	151	253
5:30 PM	2	5	0	7	2	97	0	99	159	1	0	160	266
5:45 PM	3	1	0	4	0	120	0	120	143	1	0	144	268
Total	19	13	0	32	5	426	0	431	583	4	0	587	1050
Grand Total	39	19	0	58	8	849	0	857	1094	14	0	1108	2023
Approach %	67.2	32.8	0.0		0.9	99.1	0.0		98.7	1.3	0.0		
Total %	1.9	0.9	0.0	2.9	0.4	42.0	0.0	42.4	54.1	0.7	0.0	54.8	
Exiting Leg Total	22				1113				888				2023
Cars	38	19	0	57	8	826	0	834	1071	14	0	1085	1976
% Cars	97.4	100.0	0.0	98.3	100.0	97.3	0.0	97.3	97.9	100.0	0.0	97.9	97.7
Exiting Leg Total	22				1090				864				1976
Heavy Vehicles	1	0	0	1	0	23	0	23	23	0	0	23	47
% Heavy Vehicles	2.6	0.0	0.0	1.7	0.0	2.7	0.0	2.7	2.1	0.0	0.0	2.1	2.3
Exiting Leg Total	0				23				24				47

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

5:00 PM	Quinn Road (Mirak Mill Park East Driveway)					Massachusetts Avenue				Massachusetts Avenue					Total
	from North					from East				from West					
	Right	Left	U-Turn		Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total		
5:00 PM	10	6	0		16	1	114	0	115	130	2	0	132	263	
5:15 PM	4	1	0		5	2	95	0	97	151	0	0	151	253	
5:30 PM	2	5	0		7	2	97	0	99	159	1	0	160	266	
5:45 PM	3	1	0		4	0	120	0	120	143	1	0	144	268	
Total Volume	19	13	0		32	5	426	0	431	583	4	0	587	1050	
% Approach Total	59.4	40.6	0.0			1.2	98.8	0.0		99.3	0.7	0.0			
PHF	0.475	0.542	0.000	0.500		0.625	0.888	0.000	0.898	0.917	0.500	0.000	0.917	0.979	
Cars	18	13	0		31	5	414	0	419	573	4	0	577	1027	
Cars %	94.7	100.0	0.0	96.9		100.0	97.2	0.0	97.2	98.3	100.0	0.0	98.3	97.8	
Heavy Vehicles	1	0	0		1	0	12	0	12	10	0	0	10	23	
Heavy Vehicles %	5.3	0.0	0.0	3.1		0.0	2.8	0.0	2.8	1.7	0.0	0.0	1.7	2.2	
Cars Enter Leg	18	13	0		31	5	414	0	419	573	4	0	577	1027	
Heavy Enter Leg	1	0	0		1	0	12	0	12	10	0	0	10	23	
Total Entering Leg	19	13	0		32	5	426	0	431	583	4	0	587	1050	
Cars Exiting Leg					9				586				432	1027	
Heavy Exiting Leg					0				10				13	23	
Total Exiting Leg					9				596				445	1050	



PDI File #: **207450 EE**  
 Location: **N: Quinn Road (Mirak Mill Park East Driveway)**  
 Location: **E: Massachusetts Avenue W: Massachusetts Avenue**  
 City, State: **Arlington, MA**  
 Client: **Nitsch Eng/B.Zimolka**  
 Site Code: **TBD**  
 Count Date: **Tuesday, February 4, 2020**  
 Start Time: **4:00 PM**  
 End Time: **6:00 PM**  
 Class:



### Cars

	Quinn Road (Mirak Mill Park East Driveway)				Massachusetts Avenue				Massachusetts Avenue				Total
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
4:00 PM	7	1	0	8	1	110	0	111	119	3	0	122	241
4:15 PM	1	3	0	4	1	94	0	95	115	2	0	117	216
4:30 PM	9	1	0	10	1	98	0	99	123	2	0	125	234
4:45 PM	3	1	0	4	0	110	0	110	141	3	0	144	258
Total	20	6	0	26	3	412	0	415	498	10	0	508	949
5:00 PM	9	6	0	15	1	107	0	108	128	2	0	130	253
5:15 PM	4	1	0	5	2	94	0	96	148	0	0	148	249
5:30 PM	2	5	0	7	2	96	0	98	156	1	0	157	262
5:45 PM	3	1	0	4	0	117	0	117	141	1	0	142	263
Total	18	13	0	31	5	414	0	419	573	4	0	577	1027
Grand Total	38	19	0	57	8	826	0	834	1071	14	0	1085	1976
Approach %	66.7	33.3	0.0		1.0	99.0	0.0		98.7	1.3	0.0		
Total %	1.9	1.0	0.0	2.9	0.4	41.8	0.0	42.2	54.2	0.7	0.0	54.9	
Exiting Leg Total	22				1090				864				1976

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

5:00 PM	Quinn Road (Mirak Mill Park East Driveway)				Massachusetts Avenue				Massachusetts Avenue				Total
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
5:00 PM	9	6	0	15	1	107	0	108	128	2	0	130	253
5:15 PM	4	1	0	5	2	94	0	96	148	0	0	148	249
5:30 PM	2	5	0	7	2	96	0	98	156	1	0	157	262
5:45 PM	3	1	0	4	0	117	0	117	141	1	0	142	263
Total Volume	18	13	0	31	5	414	0	419	573	4	0	577	1027
% Approach Total	58.1	41.9	0.0		1.2	98.8	0.0		99.3	0.7	0.0		
PHF	0.500	0.542	0.000	0.517	0.625	0.885	0.000	0.895	0.918	0.500	0.000	0.919	0.976
Entering Leg	18	13	0	31	5	414	0	419	573	4	0	577	1027
Exiting Leg				9				586				432	1027
Total				40				1005				1009	2054



PDI File #: **207450 EE**  
 Location: **N: Quinn Road (Mirak Mill Park East Driveway)**  
 Location: **E: Massachusetts Avenue W: Massachusetts Avenue**  
 City, State: **Arlington, MA**  
 Client: **Nitsch Eng/B.Zimolka**  
 Site Code: **TBD**  
 Count Date: **Tuesday, February 4, 2020**  
 Start Time: **4:00 PM**  
 End Time: **6:00 PM**  
 Class: **Heavy Vehicles-Combined (Buses, Single-Unit Trucks, Articulated Trucks)**



	Quinn Road (Mirak Mill Park East Driveway)				Massachusetts Avenue				Massachusetts Avenue				Total
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
4:00 PM	0	0	0	0	0	3	0	3	4	0	0	4	7
4:15 PM	0	0	0	0	0	2	0	2	3	0	0	3	5
4:30 PM	0	0	0	0	0	4	0	4	2	0	0	2	6
4:45 PM	0	0	0	0	0	2	0	2	4	0	0	4	6
Total	0	0	0	0	0	11	0	11	13	0	0	13	24
5:00 PM	1	0	0	1	0	7	0	7	2	0	0	2	10
5:15 PM	0	0	0	0	0	1	0	1	3	0	0	3	4
5:30 PM	0	0	0	0	0	1	0	1	3	0	0	3	4
5:45 PM	0	0	0	0	0	3	0	3	2	0	0	2	5
Total	1	0	0	1	0	12	0	12	10	0	0	10	23
Grand Total	1	0	0	1	0	23	0	23	23	0	0	23	47
Approach %	100.0	0.0	0.0		0.0	100.0	0.0		100.0	0.0	0.0		
Total %	2.1	0.0	0.0	2.1	0.0	48.9	0.0	48.9	48.9	0.0	0.0	48.9	
Exiting Leg Total	0				23				24				47
Buses	0	0	0	0	0	16	0	16	18	0	0	18	34
% Buses	0.0	0.0	0.0	0.0	0.0	69.6	0.0	69.6	78.3	0.0	0.0	78.3	72.3
Exiting Leg Total	0				18				16				34
Single-Unit Trucks	0	0	0	0	0	6	0	6	4	0	0	4	10
% Single-Unit	0.0	0.0	0.0	0.0	0.0	26.1	0.0	26.1	17.4	0.0	0.0	17.4	21.3
Exiting Leg Total	0				4				6				10
Articulated Trucks	1	0	0	1	0	1	0	1	1	0	0	1	3
% Articulated	100.0	0.0	0.0	100.0	0.0	4.3	0.0	4.3	4.3	0.0	0.0	4.3	6.4
Exiting Leg Total	0				1				2				3

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:15 PM	Quinn Road (Mirak Mill Park East Driveway)				Massachusetts Avenue				Massachusetts Avenue				Total
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
4:15 PM	0	0	0	0	0	2	0	2	3	0	0	3	5
4:30 PM	0	0	0	0	0	4	0	4	2	0	0	2	6
4:45 PM	0	0	0	0	0	2	0	2	4	0	0	4	6
5:00 PM	1	0	0	1	0	7	0	7	2	0	0	2	10
Total Volume	1	0	0	1	0	15	0	15	11	0	0	11	27
% Approach Total	100.0	0.0	0.0		0.0	100.0	0.0		100.0	0.0	0.0		
PHF	0.250	0.000	0.000	0.250	0.000	0.536	0.000	0.536	0.688	0.000	0.000	0.688	0.675
Buses	0	0	0	0	0	10	0	10	8	0	0	8	18
Buses %	0.0	0.0	0.0	0.0	0.0	66.7	0.0	66.7	72.7	0.0	0.0	72.7	66.7
Single-Unit Trucks	0	0	0	0	0	4	0	4	2	0	0	2	6
Single-Unit %	0.0	0.0	0.0	0.0	0.0	26.7	0.0	26.7	18.2	0.0	0.0	18.2	22.2
Articulated Trucks	1	0	0	1	0	1	0	1	1	0	0	1	3
Articulated %	100.0	0.0	0.0	100.0	0.0	6.7	0.0	6.7	9.1	0.0	0.0	9.1	11.1
Buses	0	0	0	0	0	10	0	10	8	0	0	8	18
Single-Unit Trucks	0	0	0	0	0	4	0	4	2	0	0	2	6
Articulated Trucks	1	0	0	1	0	1	0	1	1	0	0	1	3
Total Entering Leg	1	0	0	1	0	15	0	15	11	0	0	11	27
Buses				0				8				10	18
Single-Unit Trucks				0				2				4	6
Articulated Trucks				0				1				2	3
Total Exiting Leg				0				11				16	27



PDI File #: **207450 EE**  
 Location: **N: Quinn Road (Mirak Mill Park East Driveway)**  
 Location: **E: Massachusetts Avenue W: Massachusetts Avenue**  
 City, State: **Arlington, MA**  
 Client: **Nitsch Eng/B.Zimolka**  
 Site Code: **TBD**  
 Count Date: **Tuesday, February 4, 2020**  
 Start Time: **4:00 PM**  
 End Time: **6:00 PM**  
 Class:



### Buses

	Quinn Road (Mirak Mill Park East Driveway)				Massachusetts Avenue				Massachusetts Avenue				Total
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
4:00 PM	0	0	0	0	0	2	0	2	3	0	0	3	5
4:15 PM	0	0	0	0	0	2	0	2	3	0	0	3	5
4:30 PM	0	0	0	0	0	2	0	2	1	0	0	1	3
4:45 PM	0	0	0	0	0	2	0	2	2	0	0	2	4
Total	0	0	0	0	0	8	0	8	9	0	0	9	17
5:00 PM	0	0	0	0	0	4	0	4	2	0	0	2	6
5:15 PM	0	0	0	0	0	1	0	1	3	0	0	3	4
5:30 PM	0	0	0	0	0	1	0	1	2	0	0	2	3
5:45 PM	0	0	0	0	0	2	0	2	2	0	0	2	4
Total	0	0	0	0	0	8	0	8	9	0	0	9	17
Grand Total	0	0	0	0	0	16	0	16	18	0	0	18	34
Approach %	0.0	0.0	0.0		0.0	100.0	0.0		100.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	47.1	0.0	47.1	52.9	0.0	0.0	52.9	
Exiting Leg Total	0				18				16				34

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:15 PM	Quinn Road (Mirak Mill Park East Driveway)				Massachusetts Avenue				Massachusetts Avenue				Total
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
4:15 PM	0	0	0	0	0	2	0	2	3	0	0	3	5
4:30 PM	0	0	0	0	0	2	0	2	1	0	0	1	3
4:45 PM	0	0	0	0	0	2	0	2	2	0	0	2	4
5:00 PM	0	0	0	0	0	4	0	4	2	0	0	2	6
Total Volume	0	0	0	0	0	10	0	10	8	0	0	8	18
% Approach Total	0.0	0.0	0.0		0.0	100.0	0.0		100.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.625	0.000	0.625	0.667	0.000	0.000	0.667	0.750
Entering Leg	0	0	0	0	0	10	0	10	8	0	0	8	18
Exiting Leg				0				8				10	18
Total				0				18				18	36



PDI File #: **207450 EE**  
 Location: **N: Quinn Road (Mirak Mill Park East Driveway)**  
 Location: **E: Massachusetts Avenue W: Massachusetts Avenue**  
 City, State: **Arlington, MA**  
 Client: **Nitsch Eng/B.Zimolka**  
 Site Code: **TBD**  
 Count Date: **Tuesday, February 4, 2020**  
 Start Time: **4:00 PM**  
 End Time: **6:00 PM**  
 Class:



### Single-Unit Trucks

	Quinn Road (Mirak Mill Park East Driveway)					Massachusetts Avenue				Massachusetts Avenue				Total
	from North					from East				from West				
	Right	Left	U-Turn	Total		Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
4:00 PM	0	0	0	0	0	0	1	0	1	1	0	0	1	2
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	2	0	2	0	0	0	0	2
4:45 PM	0	0	0	0	0	0	0	0	0	2	0	0	2	2
Total	0	0	0	0	0	0	3	0	3	3	0	0	3	6
5:00 PM	0	0	0	0	0	0	2	0	2	0	0	0	0	2
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	1	0	0	1	1
5:45 PM	0	0	0	0	0	0	1	0	1	0	0	0	0	1
Total	0	0	0	0	0	0	3	0	3	1	0	0	1	4
Grand Total	0	0	0	0	0	0	6	0	6	4	0	0	4	10
Approach %	0.0	0.0	0.0			0.0	100.0	0.0		100.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0		0.0	60.0	0.0	60.0	40.0	0.0	0.0	40.0	
Exiting Leg Total	0					4				6				10

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Quinn Road (Mirak Mill Park East Driveway)				Massachusetts Avenue				Massachusetts Avenue				Total
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
4:00 PM	0	0	0	0	0	1	0	1	1	0	0	1	2
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	2	0	2	0	0	0	0	2
4:45 PM	0	0	0	0	0	0	0	0	2	0	0	2	2
Total Volume	0	0	0	0	0	3	0	3	3	0	0	3	6
% Approach Total	0.0	0.0	0.0		0.0	100.0	0.0		100.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.375	0.000	0.375	0.375	0.000	0.000	0.375	0.750
Entering Leg	0	0	0	0	0	3	0	3	3	0	0	3	6
Exiting Leg				0				3				3	6
Total				0				6				6	12



PDI File #: **207450 EE**  
 Location: **N: Quinn Road (Mirak Mill Park East Driveway)**  
 Location: **E: Massachusetts Avenue W: Massachusetts Avenue**  
 City, State: **Arlington, MA**  
 Client: **Nitsch Eng/B.Zimolka**  
 Site Code: **TBD**  
 Count Date: **Tuesday, February 4, 2020**  
 Start Time: **4:00 PM**  
 End Time: **6:00 PM**  
 Class:



### Articulated Trucks

	Quinn Road (Mirak Mill Park East Driveway)					Massachusetts Avenue				Massachusetts Avenue				Total
	from North					from East				from West				
	Right	Left	U-Turn	Total		Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	1	0	0	1	1
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	1	0	0	1	1
5:00 PM	1	0	0	1	0	1	0	1	0	0	0	0	0	2
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	1	0	0	1	0	1	0	1	0	0	0	0	0	2
Grand Total	1	0	0	1	0	1	0	1	1	0	0	1	3	
Approach %	100.0	0.0	0.0		0.0	100.0	0.0		100.0	0.0	0.0			
Total %	33.3	0.0	0.0	33.3	0.0	33.3	0.0	33.3	33.3	0.0	0.0	33.3		
Exiting Leg Total	0					1				2				3

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:15 PM	Quinn Road (Mirak Mill Park East Driveway)				Massachusetts Avenue				Massachusetts Avenue				Total
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	1	0	0	1	1
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	1	0	0	1	0	1	0	1	0	0	0	0	2
Total Volume	1	0	0	1	0	1	0	1	1	0	0	1	3
% Approach Total	100.0	0.0	0.0		0.0	100.0	0.0		100.0	0.0	0.0		
PHF	0.250	0.000	0.000	0.250	0.000	0.250	0.000	0.250	0.250	0.000	0.000	0.250	0.375
Entering Leg	1	0	0	1	0	1	0	1	1	0	0	1	3
Exiting Leg				0				1				2	3
Total				1				2				3	



PDI File #: 207450 EE  
 Location: N: Quinn Road (Mirak Mill Park East Driveway)  
 Location: E: Massachusetts Avenue W: Massachusetts Avenue  
 City, State: Arlington, MA  
 Client: Nitsch Eng/B.Zimolka  
 Site Code: TBD



Count Date: Tuesday, February 4, 2020  
 Start Time: 4:00 PM  
 End Time: 6:00 PM

Class:

### Bicycles (on Roadway and Crosswalks)

	Quinn Road (Mirak Mill Park East Driveway)						Massachusetts Avenue						Massachusetts Avenue						Total	
	from North						from East						from West							
	Right	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	U-Turn	CW-SB	CW-NB	Total	Thru	Left	U-Turn	CW-NB	CW-SB	Total		
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	1	0	0	0	1	1	0	0	0	0	1	2
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1
Total	0	0	0	0	0	0	0	0	1	0	0	0	1	2	0	0	0	0	2	3
5:00 PM	0	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	2
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	1
5:45 PM	0	0	0	0	0	0	0	0	4	0	0	0	4	2	0	0	0	0	2	6
Total	0	0	0	0	0	0	0	0	7	0	0	0	7	2	0	0	0	0	2	9
Grand Total	0	0	0	0	0	0	0	0	8	0	0	0	8	4	0	0	0	0	4	12
Approach %	0.0	0.0	0.0	0.0	0.0			0.0	100.0	0.0	0.0	0.0		100.0	0.0	0.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0		0.0	66.7	0.0	0.0	0.0	66.7	33.3	0.0	0.0	0.0	0.0	33.3	
Exiting Leg Total	0						4						8						12	

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

5:00 PM	Quinn Road (Mirak Mill Park East Driveway)						Massachusetts Avenue						Massachusetts Avenue						Total	
	from North						from East						from West							
	Right	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	U-Turn	CW-SB	CW-NB	Total	Thru	Left	U-Turn	CW-NB	CW-SB	Total		
5:00 PM	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	0	2
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	1
5:45 PM	0	0	0	0	0	0	0	4	0	0	0	4	2	0	0	0	0	0	2	6
Total Volume	0	0	0	0	0	0	0	7	0	0	0	7	2	0	0	0	0	0	2	9
% Approach Total	0.0	0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0	0.0		100.0	0.0	0.0	0.0	0.0			
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.438	0.000	0.000	0.000	0.438	0.250	0.000	0.000	0.000	0.000	0.000	0.250	0.375
Entering Leg	0	0	0	0	0	0	0	7	0	0	0	7	2	0	0	0	0	0	2	9
Exiting Leg	0						2						7						9	
Total	0						9						9						18	



PDI File #: 207450 EE  
 Location: N: Quinn Road (Mirak Mill Park East Driveway)  
 Location: E: Massachusetts Avenue W: Massachusetts Avenue  
 City, State: Arlington, MA  
 Client: Nitsch Eng/B.Zimolka  
 Site Code: TBD  
 Count Date: Tuesday, February 4, 2020  
 Start Time: 4:00 PM  
 End Time: 6:00 PM  
 Class:



### Pedestrians

	Quinn Road (Mirak Mill Park East Driveway)						Massachusetts Avenue						Massachusetts Avenue						Total
	from North						from East						from West						
	Right	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	U-Turn	CW-SB	CW-NB	Total	Thru	Left	U-Turn	CW-NB	CW-SB	Total	
4:00 PM	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
4:15 PM	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1	1	2
4:30 PM	0	0	0	0	3	3	0	0	0	0	0	0	0	0	0	0	0	0	3
4:45 PM	0	0	0	4	4	8	0	0	0	0	0	0	0	0	0	0	0	0	8
Total	0	0	0	7	7	14	0	0	0	0	0	0	0	0	0	0	1	1	15
5:00 PM	0	0	0	4	3	7	0	0	0	0	0	0	0	0	0	0	0	0	7
5:15 PM	0	0	0	1	1	2	0	0	0	0	0	1	1	0	0	0	0	0	3
5:30 PM	0	0	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3
5:45 PM	0	0	0	3	2	5	0	0	0	0	0	0	0	0	0	0	0	0	5
Total	0	0	0	11	6	17	0	0	0	0	0	1	1	0	0	0	0	0	18
Grand Total	0	0	0	18	13	31	0	0	0	0	0	1	1	0	0	0	0	1	33
Approach %	0	0	0	58.065	41.935		0	0	0	0	0	100		0	0	0	0	100	
Total %	0	0	0	54.545	39.394	93.939	0	0	0	0	0	3.0303	3.0303	0	0	0	0	3.0303	3.0303
Exiting Leg Total	31						1						1						33

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:30 PM	Quinn Road (Mirak Mill Park East Driveway)						Massachusetts Avenue						Massachusetts Avenue						
	from North						from East						from West						
	Right	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	U-Turn	CW-SB	CW-NB	Total	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
4:30 PM	0	0	0	0	3	3	0	0	0	0	0	0	0	0	0	0	0	0	3
4:45 PM	0	0	0	4	4	8	0	0	0	0	0	0	0	0	0	0	0	0	8
5:00 PM	0	0	0	4	3	7	0	0	0	0	0	0	0	0	0	0	0	0	7
5:15 PM	0	0	0	1	1	2	0	0	0	0	0	1	1	0	0	0	0	0	3
Total Volume	0	0	0	9	11	20	0	0	0	0	1	1	0	0	0	0	0	0	21
% Approach Total	0.0	0.0	0.0	45.0	55.0		0.0	0.0	0.0	0.0	100.0		0.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.563	0.688	0.625	0.000	0.000	0.000	0.000	0.250	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.656
Entering Leg	0	0	0	9	11	20	0	0	0	0	1	1	0	0	0	0	0	0	21
Exiting Leg	20						1						0						21
Total	40						2						0						42



PDI File #: **207450 F**  
 Location: **N: Mill Bridge S: Mirak Mill East Driveway**  
 Location: **E: Quinn Access Road W: Parking Lot**  
 City, State: **Arlington, MA**  
 Client: **Nitsch Eng/B.Zimolka**  
 Site Code: **TBD**  
 Count Date: **Tuesday, February 4, 2020**  
 Start Time: **7:00 AM**  
 End Time: **9:00 AM**  
 Class:



### Cars and Heavy Vehicles (Combined)

	Mill Bridge					Quinn Access Road					Mirak Mill East Driveway					Parking Lot					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
7:00 AM	0	0	1	0	1	0	0	1	0	1	1	1	0	0	2	0	0	0	0	0	4
7:15 AM	0	1	0	0	1	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	5
7:30 AM	0	0	1	0	1	0	0	0	0	0	1	5	0	0	6	1	0	0	0	1	8
7:45 AM	0	2	2	1	5	1	0	0	0	1	1	4	0	0	5	0	0	0	0	0	11
Total	0	3	4	1	8	1	0	1	0	2	3	14	0	0	17	1	0	0	0	1	28
8:00 AM	0	0	1	0	1	0	0	1	0	1	2	3	0	0	5	0	0	0	0	0	7
8:15 AM	0	0	0	0	0	0	0	1	0	1	4	6	1	0	11	0	0	0	0	0	12
8:30 AM	0	0	1	0	1	0	0	0	0	0	2	3	0	0	5	0	0	0	0	0	6
8:45 AM	0	2	0	0	2	0	0	1	0	1	6	1	0	0	7	0	0	0	0	0	10
Total	0	2	2	0	4	0	0	3	0	3	14	13	1	0	28	0	0	0	0	0	35
Grand Total	0	5	6	1	12	1	0	4	0	5	17	27	1	0	45	1	0	0	0	1	63
Approach %	0.0	41.7	50.0	8.3		20.0	0.0	80.0	0.0		37.8	60.0	2.2	0.0		100.0	0.0	0.0	0.0		
Total %	0.0	7.9	9.5	1.6	19.0	1.6	0.0	6.3	0.0	7.9	27.0	42.9	1.6	0.0	71.4	1.6	0.0	0.0	0.0	1.6	
Exiting Leg Total	29					23					10					1					63
Cars	0	5	6	0	11	1	0	4	0	5	17	27	1	0	45	1	0	0	0	1	62
% Cars	0.0	100.0	100.0	0.0	91.7	100.0	0.0	100.0	0.0	100.0	100.0	100.0	100.0	0.0	100.0	100.0	0.0	0.0	0.0	100.0	98.4
Exiting Leg Total	28					23					10					1					62
Heavy Vehicles	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
% Heavy Vehicles	0.0	0.0	0.0	100.0	8.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6
Exiting Leg Total	1					0					0					0					1

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:30 AM	Mill Bridge					Quinn Access Road					Mirak Mill East Driveway					Parking Lot					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
7:30 AM	0	0	1	0	1	0	0	0	0	0	1	5	0	0	6	1	0	0	0	1	8
7:45 AM	0	2	2	1	5	1	0	0	0	1	1	4	0	0	5	0	0	0	0	0	11
8:00 AM	0	0	1	0	1	0	0	1	0	1	2	3	0	0	5	0	0	0	0	0	7
8:15 AM	0	0	0	0	0	0	0	1	0	1	4	6	1	0	11	0	0	0	0	0	12
Total Volume	0	2	4	1	7	1	0	2	0	3	8	18	1	0	27	1	0	0	0	1	38
% Approach Total	0.0	28.6	57.1	14.3		33.3	0.0	66.7	0.0		29.6	66.7	3.7	0.0		100.0	0.0	0.0	0.0		
PHF	0.000	0.250	0.500	0.250	0.350	0.250	0.000	0.500	0.000	0.750	0.500	0.750	0.250	0.000	0.614	0.250	0.000	0.000	0.000	0.250	0.792
Cars	0	2	4	0	6	1	0	2	0	3	8	18	1	0	27	1	0	0	0	1	37
Cars %	0.0	100.0	100.0	0.0	85.7	100.0	0.0	100.0	0.0	100.0	100.0	100.0	100.0	0.0	100.0	100.0	0.0	0.0	0.0	100.0	97.4
Heavy Vehicles	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Heavy Vehicles %	0.0	0.0	0.0	100.0	14.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6
Cars Enter Leg	0	2	4	0	6	1	0	2	0	3	8	18	1	0	27	1	0	0	0	1	37
Heavy Enter Leg	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total Entering Leg	0	2	4	1	7	1	0	2	0	3	8	18	1	0	27	1	0	0	0	1	38
Cars Exiting Leg					19					12					5					1	37
Heavy Exiting Leg					1					0					0					0	1
Total Exiting Leg					20					12					5					1	38



PDI File #: **207450 F**  
 Location: **N: Mill Bridge S: Mirak Mill East Driveway**  
 Location: **E: Quinn Access Road W: Parking Lot**  
 City, State: **Arlington, MA**  
 Client: **Nitsch Eng/B.Zimolka**  
 Site Code: **TBD**  
 Count Date: **Tuesday, February 4, 2020**  
 Start Time: **7:00 AM**  
 End Time: **9:00 AM**  
 Class:



### Cars

	Mill Bridge					Quinn Access Road					Mirak Mill East Driveway					Parking Lot					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
7:00 AM	0	0	1	0	1	0	0	1	0	1	1	1	0	0	2	0	0	0	0	0	4
7:15 AM	0	1	0	0	1	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	5
7:30 AM	0	0	1	0	1	0	0	0	0	0	1	5	0	0	6	1	0	0	0	1	8
7:45 AM	0	2	2	0	4	1	0	0	0	1	1	4	0	0	5	0	0	0	0	0	10
Total	0	3	4	0	7	1	0	1	0	2	3	14	0	0	17	1	0	0	0	1	27
8:00 AM	0	0	1	0	1	0	0	1	0	1	2	3	0	0	5	0	0	0	0	0	7
8:15 AM	0	0	0	0	0	0	0	1	0	1	4	6	1	0	11	0	0	0	0	0	12
8:30 AM	0	0	1	0	1	0	0	0	0	0	2	3	0	0	5	0	0	0	0	0	6
8:45 AM	0	2	0	0	2	0	0	1	0	1	6	1	0	0	7	0	0	0	0	0	10
Total	0	2	2	0	4	0	0	3	0	3	14	13	1	0	28	0	0	0	0	0	35
Grand Total	0	5	6	0	11	1	0	4	0	5	17	27	1	0	45	1	0	0	0	1	62
Approach %	0.0	45.5	54.5	0.0		20.0	0.0	80.0	0.0		37.8	60.0	2.2	0.0		100.0	0.0	0.0	0.0		
Total %	0.0	8.1	9.7	0.0	17.7	1.6	0.0	6.5	0.0	8.1	27.4	43.5	1.6	0.0	72.6	1.6	0.0	0.0	0.0	1.6	
Exiting Leg Total	28					23					10					1					62

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:30 AM	Mill Bridge					Quinn Access Road					Mirak Mill East Driveway					Parking Lot					
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
7:30 AM	0	0	1	0	1	0	0	0	0	0	1	5	0	0	6	1	0	0	0	1	8
7:45 AM	0	2	2	0	4	1	0	0	0	1	1	4	0	0	5	0	0	0	0	0	10
8:00 AM	0	0	1	0	1	0	0	1	0	1	2	3	0	0	5	0	0	0	0	0	7
8:15 AM	0	0	0	0	0	0	0	1	0	1	4	6	1	0	11	0	0	0	0	0	12
Total Volume	0	2	4	0	6	1	0	2	0	3	8	18	1	0	27	1	0	0	0	1	37
% Approach Total	0.0	33.3	66.7	0.0		33.3	0.0	66.7	0.0		29.6	66.7	3.7	0.0		100.0	0.0	0.0	0.0		
PHF	0.000	0.250	0.500	0.000	0.375	0.250	0.000	0.500	0.000	0.750	0.500	0.750	0.250	0.000	0.614	0.250	0.000	0.000	0.000	0.250	0.771
Entering Leg	0	2	4	0	6	1	0	2	0	3	8	18	1	0	27	1	0	0	0	1	37
Exiting Leg	19					12					5					1					37
Total	25					15					32					2					74



PDI File #: **207450 F**  
 Location: **N: Mill Bridge S: Mirak Mill East Driveway**  
 Location: **E: Quinn Access Road W: Parking Lot**  
 City, State: **Arlington, MA**  
 Client: **Nitsch Eng/B.Zimolka**  
 Site Code: **TBD**  
 Count Date: **Tuesday, February 4, 2020**  
 Start Time: **7:00 AM**  
 End Time: **9:00 AM**  
 Class: **Heavy Vehicles-Combined (Buses, Single-Unit Trucks, Articulated Trucks)**



	Mill Bridge					Quinn Access Road					Mirak Mill East Driveway					Parking Lot					Total	
	from North					from East					from South					from West						
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7:45 AM	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
Total	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Grand Total	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
Approach %	0.0	0.0	0.0	100.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0			
Total %	0.0	0.0	0.0	100.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Exiting Leg Total	1					0					0					0					0	1
Buses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
% Buses	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total	0					0					0					0					0	0
Single-Unit Trucks	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
% Single-Unit	0.0	0.0	0.0	100.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	
Exiting Leg Total	1					0					0					0					0	1
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
% Articulated	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total	0					0					0					0					0	0

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:00 AM	Mill Bridge					Quinn Access Road					Mirak Mill East Driveway					Parking Lot					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total Volume	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
% Approach Total	0.0	0.0	0.0	100.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.250	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250
Buses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Buses %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Single-Unit Trucks	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Single-Unit %	0.0	0.0	0.0	100.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Articulated %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Buses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Single-Unit Trucks	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Entering Leg	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Buses	0					0					0					0					0
Single-Unit Trucks	1					0					0					0					0
Articulated Trucks	0					0					0					0					0
Total Exiting Leg	1					0					0					0					0



PDI File #: **207450 F**  
 Location: **N: Mill Bridge S: Mirak Mill East Driveway**  
 Location: **E: Quinn Access Road W: Parking Lot**  
 City, State: **Arlington, MA**  
 Client: **Nitsch Eng/B.Zimolka**  
 Site Code: **TBD**  
 Count Date: **Tuesday, February 4, 2020**  
 Start Time: **7:00 AM**  
 End Time: **9:00 AM**  
 Class:



### Buses

	Mill Bridge					Quinn Access Road					Mirak Mill East Driveway					Parking Lot					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total	0					0					0					0					0

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:00 AM	Mill Bridge					Quinn Access Road					Mirak Mill East Driveway					Parking Lot					
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Approach Total	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Exiting Leg	0					0					0					0					0
Total	0					0					0					0					0



PDI File #: **207450 F**  
 Location: **N: Mill Bridge S: Mirak Mill East Driveway**  
 Location: **E: Quinn Access Road W: Parking Lot**  
 City, State: **Arlington, MA**  
 Client: **Nitsch Eng/B.Zimolka**  
 Site Code: **TBD**  
 Count Date: **Tuesday, February 4, 2020**  
 Start Time: **7:00 AM**  
 End Time: **9:00 AM**  
 Class:



### Single-Unit Trucks

	Mill Bridge					Quinn Access Road					Mirak Mill East Driveway					Parking Lot					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Approach %	0.0	0.0	0.0	100.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		
Total %	0.0	0.0	0.0	100.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total	1					0					0					0					1

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:00 AM	Mill Bridge					Quinn Access Road					Mirak Mill East Driveway					Parking Lot					
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total Volume	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
% Approach Total	0.0	0.0	0.0	100.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.250	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250
Entering Leg	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Exiting Leg	1					0					0					0					1
Total	2					0					0					0					2



PDI File #: **207450 F**  
 Location: **N: Mill Bridge S: Mirak Mill East Driveway**  
 Location: **E: Quinn Access Road W: Parking Lot**  
 City, State: **Arlington, MA**  
 Client: **Nitsch Eng/B.Zimolka**  
 Site Code: **TBD**  
 Count Date: **Tuesday, February 4, 2020**  
 Start Time: **7:00 AM**  
 End Time: **9:00 AM**  
 Class:



### Articulated Trucks

	Mill Bridge					Quinn Access Road					Mirak Mill East Driveway					Parking Lot					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total	0					0					0					0					0

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:00 AM	Mill Bridge					Quinn Access Road					Mirak Mill East Driveway					Parking Lot					
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Approach Total	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Exiting Leg	0					0					0					0					0
Total	0					0					0					0					0



PDI File #: **207450 F**  
 Location: **N: Mill Bridge S: Mirak Mill East Driveway**  
 Location: **E: Quinn Access Road W: Parking Lot**  
 City, State: **Arlington, MA**  
 Client: **Nitsch Eng/B.Zimolka**  
 Site Code: **TBD**  
 Count Date: **Tuesday, February 4, 2020**  
 Start Time: **7:00 AM**  
 End Time: **9:00 AM**  
 Class:



### Bicycles (on Roadway and Crosswalks)

	Mill Bridge							Quinn Access Road							Mirak Mill East Driveway							Parking Lot							Total
	from North							from East							from South							from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Approach %	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0			
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total	0							0							0							0							0

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:00 AM	Mill Bridge							Quinn Access Road							Mirak Mill East Driveway							Parking Lot								
	from North							from East							from South							from West								
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Approach Total	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Exiting Leg	0							0							0							0							0	
Total	0							0							0							0							0	



PDI File #: **207450 F**  
 Location: **N: Mill Bridge S: Mirak Mill East Driveway**  
 Location: **E: Quinn Access Road W: Parking Lot**  
 City, State: **Arlington, MA**  
 Client: **Nitsch Eng/B.Zimolka**  
 Site Code: **TBD**  
 Count Date: **Tuesday, February 4, 2020**  
 Start Time: **7:00 AM**  
 End Time: **9:00 AM**  
 Class:



**Pedestrians**

	Mill Bridge							Quinn Access Road							Mirak Mill East Driveway							Parking Lot							Total
	from North							from East							from South							from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Exiting Leg Total	0							0							0							0							0

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:00 AM	Mill Bridge							Quinn Access Road							Mirak Mill East Driveway							Parking Lot							Total
	from North							from East							from South							from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
% Approach Total	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Exiting Leg	0							0							0							0							0
Total	0							0							0							0							0



PDI File #: **207450 FF**  
 Location: **N: Mill Bridge S: Mirak Mill East Driveway**  
 Location: **E: Quinn Access Road W: Parking Lot**  
 City, State: **Arlington, MA**  
 Client: **Nitsch Eng/B.Zimolka**  
 Site Code: **TBD**  
 Count Date: **Tuesday, February 4, 2020**  
 Start Time: **4:00 PM**  
 End Time: **6:00 PM**  
 Class:



### Cars and Heavy Vehicles (Combined)

	Mill Bridge					Quinn Access Road					Mirak Mill East Driveway					Parking Lot					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
4:00 PM	0	3	0	0	3	0	0	1	0	1	2	1	0	0	3	0	0	0	0	0	7
4:15 PM	0	1	0	0	1	0	0	3	0	3	0	1	0	0	1	0	0	0	0	0	5
4:30 PM	0	7	0	0	7	0	0	1	0	1	3	1	0	0	4	0	0	0	0	0	12
4:45 PM	0	5	0	0	5	0	0	4	0	4	1	0	0	0	1	0	0	0	0	0	10
Total	0	16	0	0	16	0	0	9	0	9	6	3	0	0	9	0	0	0	0	0	34
5:00 PM	0	7	0	0	7	0	0	3	0	3	1	1	0	0	2	1	0	0	0	1	13
5:15 PM	0	1	0	0	1	0	0	1	0	1	1	2	0	0	3	0	0	0	0	0	5
5:30 PM	0	4	0	0	4	0	0	0	0	0	0	0	1	0	1	1	0	0	0	1	6
5:45 PM	0	2	0	0	2	0	0	3	0	3	0	1	0	0	1	0	0	0	0	0	6
Total	0	14	0	0	14	0	0	7	0	7	2	4	1	0	7	2	0	0	0	2	30
Grand Total	0	30	0	0	30	0	0	16	0	16	8	7	1	0	16	2	0	0	0	2	64
Approach %	0.0	100.0	0.0	0.0		0.0	0.0	100.0	0.0		50.0	43.8	6.3	0.0		100.0	0.0	0.0	0.0		
Total %	0.0	46.9	0.0	0.0	46.9	0.0	0.0	25.0	0.0	25.0	12.5	10.9	1.6	0.0	25.0	3.1	0.0	0.0	0.0	3.1	
Exiting Leg Total	7					8					48					1					64
Cars	0	29	0	0	29	0	0	16	0	16	8	7	1	0	16	2	0	0	0	2	63
% Cars	0.0	96.7	0.0	0.0	96.7	0.0	0.0	100.0	0.0	100.0	100.0	100.0	100.0	0.0	100.0	100.0	0.0	0.0	0.0	100.0	98.4
Exiting Leg Total	7					8					47					1					63
Heavy Vehicles	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
% Heavy Vehicles	0.0	3.3	0.0	0.0	3.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6
Exiting Leg Total	0					0					1					0					1

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:15 PM	Mill Bridge					Quinn Access Road					Mirak Mill East Driveway					Parking Lot					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
4:15 PM	0	1	0	0	1	0	0	3	0	3	0	1	0	0	1	0	0	0	0	0	5
4:30 PM	0	7	0	0	7	0	0	1	0	1	3	1	0	0	4	0	0	0	0	0	12
4:45 PM	0	5	0	0	5	0	0	4	0	4	1	0	0	0	1	0	0	0	0	0	10
5:00 PM	0	7	0	0	7	0	0	3	0	3	1	1	0	0	2	1	0	0	0	1	13
Total Volume	0	20	0	0	20	0	0	11	0	11	5	3	0	0	8	1	0	0	0	1	40
% Approach Total	0.0	100.0	0.0	0.0		0.0	0.0	100.0	0.0		62.5	37.5	0.0	0.0		100.0	0.0	0.0	0.0		
PHF	0.000	0.714	0.000	0.000	0.714	0.000	0.000	0.688	0.000	0.688	0.417	0.750	0.000	0.000	0.500	0.250	0.000	0.000	0.000	0.250	0.769
Cars	0	20	0	0	20	0	0	11	0	11	5	3	0	0	8	1	0	0	0	1	40
Cars %	0.0	100.0	0.0	0.0	100.0	0.0	0.0	100.0	0.0	100.0	100.0	100.0	0.0	0.0	100.0	100.0	0.0	0.0	0.0	100.0	100.0
Heavy Vehicles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Heavy Vehicles %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cars Enter Leg	0	20	0	0	20	0	0	11	0	11	5	3	0	0	8	1	0	0	0	1	40
Heavy Enter Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Entering Leg	0	20	0	0	20	0	0	11	0	11	5	3	0	0	8	1	0	0	0	1	40
Cars Exiting Leg	3					5					32					0					40
Heavy Exiting Leg	0					0					0					0					0
Total Exiting Leg	3					5					32					0					40



PDI File #: **207450 FF**  
 Location: **N: Mill Bridge S: Mirak Mill East Driveway**  
 Location: **E: Quinn Access Road W: Parking Lot**  
 City, State: **Arlington, MA**  
 Client: **Nitsch Eng/B.Zimolka**  
 Site Code: **TBD**  
 Count Date: **Tuesday, February 4, 2020**  
 Start Time: **4:00 PM**  
 End Time: **6:00 PM**  
 Class:



### Cars

	Mill Bridge					Quinn Access Road					Mirak Mill East Driveway					Parking Lot					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
4:00 PM	0	3	0	0	3	0	0	1	0	1	2	1	0	0	3	0	0	0	0	0	7
4:15 PM	0	1	0	0	1	0	0	3	0	3	0	1	0	0	1	0	0	0	0	0	5
4:30 PM	0	7	0	0	7	0	0	1	0	1	3	1	0	0	4	0	0	0	0	0	12
4:45 PM	0	5	0	0	5	0	0	4	0	4	1	0	0	0	1	0	0	0	0	0	10
Total	0	16	0	0	16	0	0	9	0	9	6	3	0	0	9	0	0	0	0	0	34
5:00 PM	0	7	0	0	7	0	0	3	0	3	1	1	0	0	2	1	0	0	0	1	13
5:15 PM	0	1	0	0	1	0	0	1	0	1	1	2	0	0	3	0	0	0	0	0	5
5:30 PM	0	3	0	0	3	0	0	0	0	0	0	0	1	0	1	1	0	0	0	1	5
5:45 PM	0	2	0	0	2	0	0	3	0	3	0	1	0	0	1	0	0	0	0	0	6
Total	0	13	0	0	13	0	0	7	0	7	2	4	1	0	7	2	0	0	0	2	29
Grand Total	0	29	0	0	29	0	0	16	0	16	8	7	1	0	16	2	0	0	0	2	63
Approach %	0.0	100.0	0.0	0.0		0.0	0.0	100.0	0.0		50.0	43.8	6.3	0.0		100.0	0.0	0.0	0.0		
Total %	0.0	46.0	0.0	0.0	46.0	0.0	0.0	25.4	0.0	25.4	12.7	11.1	1.6	0.0	25.4	3.2	0.0	0.0	0.0	3.2	
Exiting Leg Total	7					8					47					1					63

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:15 PM	Mill Bridge					Quinn Access Road					Mirak Mill East Driveway					Parking Lot					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
4:15 PM	0	1	0	0	1	0	0	3	0	3	0	1	0	0	1	0	0	0	0	0	5
4:30 PM	0	7	0	0	7	0	0	1	0	1	3	1	0	0	4	0	0	0	0	0	12
4:45 PM	0	5	0	0	5	0	0	4	0	4	1	0	0	0	1	0	0	0	0	0	10
5:00 PM	0	7	0	0	7	0	0	3	0	3	1	1	0	0	2	1	0	0	0	1	13
Total Volume	0	20	0	0	20	0	0	11	0	11	5	3	0	0	8	1	0	0	0	1	40
% Approach Total	0.0	100.0	0.0	0.0		0.0	0.0	100.0	0.0		62.5	37.5	0.0	0.0		100.0	0.0	0.0	0.0		
PHF	0.000	0.714	0.000	0.000	0.714	0.000	0.000	0.688	0.000	0.688	0.417	0.750	0.000	0.000	0.500	0.250	0.000	0.000	0.000	0.250	0.769
Entering Leg	0	20	0	0	20	0	0	11	0	11	5	3	0	0	8	1	0	0	0	1	40
Exiting Leg	3					5					32					0					40
Total	23					16					40					1					80



PDI File #: **207450 FF**  
 Location: **N: Mill Bridge S: Mirak Mill East Driveway**  
 Location: **E: Quinn Access Road W: Parking Lot**  
 City, State: **Arlington, MA**  
 Client: **Nitsch Eng/B.Zimolka**  
 Site Code: **TBD**  
 Count Date: **Tuesday, February 4, 2020**  
 Start Time: **4:00 PM**  
 End Time: **6:00 PM**  
 Class: **Heavy Vehicles-Combined (Buses, Single-Unit Trucks, Articulated Trucks)**



	Mill Bridge					Quinn Access Road					Mirak Mill East Driveway					Parking Lot					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Grand Total	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Approach %	0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		
Total %	0.0	100.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total	0					0					1					0					1
Buses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Buses	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Exiting Leg Total	0					0					0					0					0
Single-Unit Trucks	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
% Single-Unit	0.0	100.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0
Exiting Leg Total	0					0					1					0					1
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Articulated	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Exiting Leg Total	0					0					0					0					0

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:45 PM	Mill Bridge					Quinn Access Road					Mirak Mill East Driveway					Parking Lot					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total Volume	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
% Approach Total	0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		
PHF	0.000	0.250	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250
Buses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Buses %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Single-Unit Trucks	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Single-Unit %	0.0	100.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Articulated %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Buses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Single-Unit Trucks	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Entering Leg	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Buses	0					0					0					0					0
Single-Unit Trucks	0					0					1					0					1
Articulated Trucks	0					0					0					0					0
Total Exiting Leg	0					0					1					0					1



PDI File #: **207450 FF**  
 Location: **N: Mill Bridge S: Mirak Mill East Driveway**  
 Location: **E: Quinn Access Road W: Parking Lot**  
 City, State: **Arlington, MA**  
 Client: **Nitsch Eng/B.Zimolka**  
 Site Code: **TBD**  
 Count Date: **Tuesday, February 4, 2020**  
 Start Time: **4:00 PM**  
 End Time: **6:00 PM**  
 Class:



### Buses

	Mill Bridge					Quinn Access Road					Mirak Mill East Driveway					Parking Lot					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total	0					0					0					0					0

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Mill Bridge					Quinn Access Road					Mirak Mill East Driveway					Parking Lot					
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Approach Total	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Exiting Leg	0					0					0					0					0
Total	0					0					0					0					0



PDI File #: **207450 FF**  
 Location: **N: Mill Bridge S: Mirak Mill East Driveway**  
 Location: **E: Quinn Access Road W: Parking Lot**  
 City, State: **Arlington, MA**  
 Client: **Nitsch Eng/B.Zimolka**  
 Site Code: **TBD**  
 Count Date: **Tuesday, February 4, 2020**  
 Start Time: **4:00 PM**  
 End Time: **6:00 PM**  
 Class:



### Single-Unit Trucks

	Mill Bridge					Quinn Access Road					Mirak Mill East Driveway					Parking Lot					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Grand Total	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Approach %	0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		
Total %	0.0	100.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total	0					0					1					0					1

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:45 PM	Mill Bridge					Quinn Access Road					Mirak Mill East Driveway					Parking Lot					
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total Volume	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
% Approach Total	0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		
PHF	0.000	0.250	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250
Entering Leg	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Exiting Leg	0					0					1					0					1
Total	1					0					1					0					2



PDI File #: **207450 FF**  
 Location: **N: Mill Bridge S: Mirak Mill East Driveway**  
 Location: **E: Quinn Access Road W: Parking Lot**  
 City, State: **Arlington, MA**  
 Client: **Nitsch Eng/B.Zimolka**  
 Site Code: **TBD**  
 Count Date: **Tuesday, February 4, 2020**  
 Start Time: **4:00 PM**  
 End Time: **6:00 PM**  
 Class:



### Articulated Trucks

	Mill Bridge					Quinn Access Road					Mirak Mill East Driveway					Parking Lot					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total	0					0					0					0					0

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Mill Bridge					Quinn Access Road					Mirak Mill East Driveway					Parking Lot					
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Approach Total	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Exiting Leg	0					0					0					0					0
Total	0					0					0					0					0



PDI File #: 207450 FF  
 Location: N: Mill Bridge S: Mirak Mill East Driveway  
 Location: E: Quinn Access Road W: Parking Lot  
 City, State: Arlington, MA  
 Client: Nitsch Eng/B.Zimolka  
 Site Code: TBD  
 Count Date: Tuesday, February 4, 2020  
 Start Time: 4:00 PM  
 End Time: 6:00 PM  
 Class:



### Bicycles (on Roadway and Crosswalks)

	Mill Bridge							Quinn Access Road							Mirak Mill East Driveway							Parking Lot							Total
	from North							from East							from South							from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	
4:00 PM	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Approach %	0.0	100.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		
Total %	0.0	100.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total	0							0							1							0							1

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Mill Bridge							Quinn Access Road							Mirak Mill East Driveway							Parking Lot							Total
	from North							from East							from South							from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	
4:00 PM	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total Volume	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
% Approach Total	0.0	100.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0			
PHF	0.000	0.250	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250		
Entering Leg	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
Exiting Leg	0							0							1							0							1
Total	1							0							1							0							2



PDI File #: **207450 FF**  
 Location: **N: Mill Bridge S: Mirak Mill East Driveway**  
 Location: **E: Quinn Access Road W: Parking Lot**  
 City, State: **Arlington, MA**  
 Client: **Nitsch Eng/B.Zimolka**  
 Site Code: **TBD**  
 Count Date: **Tuesday, February 4, 2020**  
 Start Time: **4:00 PM**  
 End Time: **6:00 PM**  
 Class:



### Pedestrians

	Mill Bridge							Quinn Access Road							Mirak Mill East Driveway							Parking Lot							Total
	from North							from East							from South							from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	2	2	3
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	0	0	0	0	0	0	0	0	0	2	2	4
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2
Grand Total	0	0	0	0	0	0	0	0	0	0	0	2	1	3	0	0	0	0	0	0	0	0	0	0	0	0	3	3	6
Approach %	0	0	0	0	0	0	0	0	0	0	0	66.7	33.3		0	0	0	0	0	0	0	0	0	0	0	0	100		
Total %	0	0	0	0	0	0	0	0	0	0	0	33.3	16.7	50	0	0	0	0	0	0	0	0	0	0	0	0	50	50	
Exiting Leg Total	0							3							0							3							6

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Mill Bridge							Quinn Access Road							Mirak Mill East Driveway							Parking Lot							Total
	from North							from East							from South							from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	2	2	3
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	0	0	0	0	0	0	0	0	0	2	2	4
% Approach Total	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	50.0	50.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.250	0.500	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.250	0.333
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	0	0	0	0	0	0	0	0	0	2	2	4
Exiting Leg	0							2							0							2							4
Total	0							4							0							4							8



PDI File #: 207450 G  
 Location: N: Forest Street S: Forest Street  
 Location: E: Ryder Street W: Peirce Street SE: Driveway  
 City, State: Arlington, MA  
 Client: Nitsch Eng/B.Zimolka  
 Site Code: TBD  
 Count Date: Tuesday, February 4, 2020  
 Start Time: 7:00 AM  
 End Time: 9:00 AM  
 Class:



### Cars and Heavy Vehicles (Combined)

	Forest Street						Ryder Street						Driveway						Forest Street						Peirce Street						Total
	from North						from East						from Southeast						from South						from West						
	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Thru	Left	U-Turn	Total	Right	Bear Right	Thru	Left	U-Turn	Total	
7:00 AM	3	61	0	0	0	64	0	1	5	0	0	6	0	0	0	1	0	1	0	4	14	0	0	18	1	0	0	2	0	3	92
7:15 AM	9	58	0	0	0	67	2	0	6	0	0	8	0	0	0	1	0	1	0	1	14	0	0	15	0	0	0	3	0	3	94
7:30 AM	16	81	0	1	0	98	1	0	3	0	0	4	0	0	0	0	0	0	0	5	41	1	0	47	0	0	0	4	0	4	153
7:45 AM	34	62	0	3	0	99	1	0	1	0	0	2	0	0	0	0	0	0	0	2	50	1	0	53	0	0	0	0	0	0	154
Total	62	262	0	4	0	328	4	1	15	0	0	20	0	0	0	2	0	2	0	12	119	2	0	133	1	0	0	9	0	10	493
8:00 AM	6	74	0	5	0	85	1	0	3	0	0	4	0	1	0	0	0	1	0	2	53	1	0	56	1	0	0	4	0	5	151
8:15 AM	7	52	0	1	0	60	0	0	1	0	0	1	0	0	0	0	0	0	0	0	27	0	0	27	0	0	0	2	0	2	90
8:30 AM	1	44	0	2	0	47	1	0	0	0	0	1	0	0	0	0	0	0	0	1	26	0	0	27	0	0	0	1	0	1	76
8:45 AM	2	36	0	1	0	39	0	0	2	0	0	2	0	0	0	0	0	0	0	1	24	1	0	26	1	0	0	1	0	2	69
Total	16	206	0	9	0	231	2	0	6	0	0	8	0	1	0	0	0	1	0	4	130	2	0	136	2	0	0	8	0	10	386
Grand Total	78	468	0	13	0	559	6	1	21	0	0	28	0	1	0	2	0	3	0	16	249	4	0	269	3	0	0	17	0	20	879
Approach %	14.0	83.7	0.0	2.3	0.0		21.4	3.6	75.0	0.0	0.0		0.0	33.3	0.0	66.7	0.0		0.0	5.9	92.6	1.5	0.0		15.0	0.0	0.0	85.0	0.0		
Total %	8.9	53.2	0.0	1.5	0.0	63.6	0.7	0.1	2.4	0.0	0.0	3.2	0.0	0.1	0.0	0.2	0.0	0.3	0.0	1.8	28.3	0.5	0.0	30.6	0.3	0.0	0.0	1.9	0.0	2.3	
Exiting Leg Total	273						29						0						494						83						879
Cars	76	459	0	13	0	548	5	1	12	0	0	18	0	1	0	2	0	3	0	12	246	2	0	260	3	0	0	17	0	20	849
% Cars	97.4	98.1	0.0	100.0	0.0	98.0	83.3	100.0	57.1	0.0	0.0	64.3	0.0	100.0	0.0	100.0	0.0	100.0	0.0	75.0	98.8	50.0	0.0	96.7	100.0	0.0	0.0	100.0	0.0	100.0	96.6
Exiting Leg Total	269						25						0						476						79						849
Heavy Vehicles	2	9	0	0	0	11	1	0	9	0	0	10	0	0	0	0	0	0	0	4	3	2	0	9	0	0	0	0	0	0	30
% Heavy Vehicles	2.6	1.9	0.0	0.0	0.0	2.0	16.7	0.0	42.9	0.0	0.0	35.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25.0	1.2	50.0	0.0	3.3	0.0	0.0	0.0	0.0	0.0	0.0	3.4
Exiting Leg Total	4						4						0						18						4						30

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:15 AM	Forest Street						Ryder Street						Driveway						Forest Street						Peirce Street						Total	
	from North						from East						from Southeast						from South						from West							
	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Thru	Left	U-Turn	Total	Right	Bear Right	Thru	Left	U-Turn	Total		
7:15 AM	9	58	0	0	0	67	2	0	6	0	0	8	0	0	0	1	0	1	0	1	14	0	0	15	0	0	0	3	0	3	94	
7:30 AM	16	81	0	1	0	98	1	0	3	0	0	4	0	0	0	0	0	0	0	5	41	1	0	47	0	0	0	4	0	4	153	
7:45 AM	34	62	0	3	0	99	1	0	1	0	0	2	0	0	0	0	0	0	0	2	50	1	0	53	0	0	0	0	0	0	154	
8:00 AM	6	74	0	5	0	85	1	0	3	0	0	4	0	1	0	0	0	1	0	2	53	1	0	56	1	0	0	4	0	5	151	
Total Volume	65	275	0	9	0	349	5	0	13	0	0	18	0	1	0	1	0	2	0	10	158	3	0	171	1	0	0	11	0	12	552	
% Approach Total	18.6	78.8	0.0	2.6	0.0		27.8	0.0	72.2	0.0	0.0		0.0	50.0	0.0	50.0	0.0		0.0	5.8	92.4	1.8	0.0		8.3	0.0	0.0	91.7	0.0			
PHF	0.478	0.849	0.000	0.450	0.000	0.881	0.625	0.000	0.542	0.000	0.000	0.563	0.000	0.250	0.000	0.250	0.000	0.500	0.000	0.500	0.745	0.750	0.000	0.763	0.250	0.000	0.000	0.688	0.000	0.600	0.896	
Cars	64	272	0	9	0	345	4	0	8	0	0	12	0	1	0	1	0	2	0	7	156	2	0	165	1	0	0	11	0	12	536	
Cars %	98.5	98.9	0.0	100.0	0.0	98.9	80.0	0.0	61.5	0.0	0.0	66.7	0.0	100.0	0.0	100.0	0.0	100.0	0.0	70.0	98.7	66.7	0.0	96.5	100.0	0.0	0.0	100.0	0.0	100.0	97.1	
Heavy Vehicles	1	3	0	0	0	4	1	0	5	0	0	6	0	0	0	0	0	0	0	3	2	1	0	6	0	0	0	0	0	0	16	
Heavy Vehicles %	1.5	1.1	0.0	0.0	0.0	1.1	20.0	0.0	38.5	0.0	0.0	33.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	30.0	1.3	33.3	0.0	3.5	0.0	0.0	0.0	0.0	0.0	0.0	2.9	
Cars Enter Leg	64	272	0	9	0	345	4	0	8	0	0	12	0	1	0	1	0	2	0	7	156	2	0	165	1	0	0	11	0	12	536	
Heavy Enter Leg	1	3	0	0	0	4	1	0	5	0	0	6	0	0	0	0	0	0	0	3	2	1	0	6	0	0	0	0	0	0	16	
Total Entering Leg	65	275	0	9	0	349	5	0	13	0	0	18	0	1	0	1	0	2	0	10	158	3	0	171	1	0	0	11	0	12	552	
Cars Exiting Leg						172						16						0						282							66	536
Heavy Exiting Leg						3						3						0						8						2	16	
Total Exiting Leg						175						19						0						290						68	552	



PDI File #: **207450 G**  
 Location: **N: Forest Street S: Forest Street**  
 Location: **E: Ryder Street W: Peirce Street SE: Driveway**  
 City, State: **Arlington, MA**  
 Client: **Nitsch Eng/B.Zimolka**  
 Site Code: **TBD**  
 Count Date: **Tuesday, February 4, 2020**  
 Start Time: **7:00 AM**  
 End Time: **9:00 AM**  
 Class:



### Cars

	Forest Street						Ryder Street						Driveway						Forest Street						Peirce Street						Total
	from North						from East						from Southeast						from South						from West						
	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Thru	Left	U-Turn	Total	Right	Bear Right	Thru	Left	U-Turn	Total	
7:00 AM	3	59	0	0	0	62	0	1	3	0	0	4	0	0	0	1	0	1	0	4	14	0	0	18	1	0	0	2	0	3	88
7:15 AM	9	58	0	0	0	67	1	0	2	0	0	3	0	0	0	1	0	1	0	1	13	0	0	14	0	0	0	3	0	3	88
7:30 AM	16	81	0	1	0	98	1	0	2	0	0	3	0	0	0	0	0	0	0	2	40	0	0	42	0	0	0	4	0	4	147
7:45 AM	34	62	0	3	0	99	1	0	1	0	0	2	0	0	0	0	0	0	0	2	50	1	0	53	0	0	0	0	0	0	154
Total	62	260	0	4	0	326	3	1	8	0	0	12	0	0	0	2	0	2	0	9	117	1	0	127	1	0	0	9	0	10	477
8:00 AM	5	71	0	5	0	81	1	0	3	0	0	4	0	1	0	0	0	1	0	2	53	1	0	56	1	0	0	4	0	5	147
8:15 AM	7	51	0	1	0	59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	27	0	0	27	0	0	0	2	0	2	88
8:30 AM	1	42	0	2	0	45	1	0	0	0	0	1	0	0	0	0	0	0	0	0	25	0	0	25	0	0	0	1	0	1	72
8:45 AM	1	35	0	1	0	37	0	0	1	0	0	1	0	0	0	0	0	0	0	1	24	0	0	25	1	0	0	1	0	2	65
Total	14	199	0	9	0	222	2	0	4	0	0	6	0	1	0	0	0	1	0	3	129	1	0	133	2	0	0	8	0	10	372
Grand Total	76	459	0	13	0	548	5	1	12	0	0	18	0	1	0	2	0	3	0	12	246	2	0	260	3	0	0	17	0	20	849
Approach %	13.9	83.8	0.0	2.4	0.0		27.8	5.6	66.7	0.0	0.0		0.0	33.3	0.0	66.7	0.0		0.0	4.6	94.6	0.8	0.0		15.0	0.0	0.0	85.0	0.0		
Total %	9.0	54.1	0.0	1.5	0.0	64.5	0.6	0.1	1.4	0.0	0.0	2.1	0.0	0.1	0.0	0.2	0.0	0.4	0.0	1.4	29.0	0.2	0.0	30.6	0.4	0.0	0.0	2.0	0.0	2.4	
Exiting Leg Total	269						25						0						476						79						849

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:15 AM	Forest Street						Ryder Street						Driveway						Forest Street						Peirce Street						Total
	from North						from East						from Southeast						from South						from West						
	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Thru	Left	U-Turn	Total	Right	Bear Right	Thru	Left	U-Turn	Total	
7:15 AM	9	58	0	0	0	67	1	0	2	0	0	3	0	0	0	1	0	1	0	1	13	0	0	14	0	0	0	3	0	3	88
7:30 AM	16	81	0	1	0	98	1	0	2	0	0	3	0	0	0	0	0	0	0	2	40	0	0	42	0	0	0	4	0	4	147
7:45 AM	34	62	0	3	0	99	1	0	1	0	0	2	0	0	0	0	0	0	0	2	50	1	0	53	0	0	0	0	0	0	154
8:00 AM	5	71	0	5	0	81	1	0	3	0	0	4	0	1	0	0	0	1	0	2	53	1	0	56	1	0	0	4	0	5	147
Total Volume	64	272	0	9	0	345	4	0	8	0	0	12	0	1	0	1	0	2	0	7	156	2	0	165	1	0	0	11	0	12	536
% Approach Total	18.6	78.8	0.0	2.6	0.0		33.3	0.0	66.7	0.0	0.0		0.0	50.0	0.0	50.0	0.0		0.0	4.2	94.5	1.2	0.0		8.3	0.0	0.0	91.7	0.0		
PHF	0.471	0.840	0.000	0.450	0.000	0.871	1.000	0.000	0.667	0.000	0.000	0.750	0.000	0.250	0.000	0.250	0.000	0.500	0.000	0.875	0.736	0.500	0.000	0.737	0.250	0.000	0.000	0.688	0.000	0.600	0.870
Entering Leg	64	272	0	9	0	345	4	0	8	0	0	12	0	1	0	1	0	2	0	7	156	2	0	165	1	0	0	11	0	12	536
Exiting Leg						172						16						0						282						66	536
Total						517						28					2						447						78	1072	



PDI File #: 207450 G  
 Location: N: Forest Street S: Forest Street  
 Location: E: Ryder Street W: Peirce Street SE: Driveway  
 City, State: Arlington, MA  
 Client: Nitsch Eng/B.Zimolka  
 Site Code: TBD  
 Count Date: Tuesday, February 4, 2020  
 Start Time: 7:00 AM  
 End Time: 9:00 AM  
 Class:



### Heavy Vehicles-Combined (Buses, Single-Unit Trucks, Articulated Trucks)

	Forest Street						Ryder Street						Driveway						Forest Street						Peirce Street						Total
	from North						from East						from Southeast						from South						from West						
	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Thru	Left	U-Turn	Total	Right	Bear Right	Thru	Left	U-Turn	Total	
7:00 AM	0	2	0	0	0	2	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
7:15 AM	0	0	0	0	0	0	1	0	4	0	0	5	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	6
7:30 AM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	3	1	1	0	5	0	0	0	0	0	0	6
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	2	0	0	0	2	1	0	7	0	0	8	0	0	0	0	0	0	0	3	2	1	0	6	0	0	0	0	0	0	16
8:00 AM	1	3	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
8:15 AM	0	1	0	0	0	1	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
8:30 AM	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	0	4
8:45 AM	1	1	0	0	0	2	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	4
Total	2	7	0	0	0	9	0	0	2	0	0	2	0	0	0	0	0	0	0	1	1	1	0	3	0	0	0	0	0	0	14
Grand Total	2	9	0	0	0	11	1	0	9	0	0	10	0	0	0	0	0	0	0	4	3	2	0	9	0	0	0	0	0	0	30
Approach %	18.2	81.8	0.0	0.0	0.0		10.0	0.0	90.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	44.4	33.3	22.2	0.0		0.0	0.0	0.0	0.0	0.0		
Total %	6.7	30.0	0.0	0.0	0.0	36.7	3.3	0.0	30.0	0.0	0.0	33.3	0.0	0.0	0.0	0.0	0.0	0.0		13.3	10.0	6.7	30.0		0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total	4						4						0						18						4						30
Buses	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
% Buses	50.0	0.0	0.0	0.0	0.0	9.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	3.3
Exiting Leg Total	0						0						0						0						1						1
Single-Unit Trucks	1	9	0	0	0	10	1	0	8	0	0	9	0	0	0	0	0	0	0	3	3	2	0	8	0	0	0	0	0	0	27
% Single-Unit	50.0	100.0	0.0	0.0	0.0	90.9	100.0	0.0	88.9	0.0	0.0	90.0	0.0	0.0	0.0	0.0	0.0	0.0		75.0	100.0	100.0	0.0	88.9		0.0	0.0	0.0	0.0	0.0	90.0
Exiting Leg Total	4						3						0						17						3						27
Articulated Trucks	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	2
% Articulated	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.1	0.0	0.0	10.0	0.0	0.0	0.0	0.0	0.0	0.0		25.0	0.0	0.0	0.0	11.1		0.0	0.0	0.0	0.0	0.0	6.7
Exiting Leg Total	0						1						0						1						0						2

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:00 AM	Forest Street						Ryder Street						Driveway						Forest Street						Peirce Street						Total
	from North						from East						from Southeast						from South						from West						
	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Thru	Left	U-Turn	Total	Right	Bear Right	Thru	Left	U-Turn	Total	
7:00 AM	0	2	0	0	0	2	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
7:15 AM	0	0	0	0	0	0	1	0	4	0	0	5	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	6
7:30 AM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	3	1	1	0	5	0	0	0	0	0	0	6
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	2	0	0	0	2	1	0	7	0	0	8	0	0	0	0	0	0	0	3	2	1	0	6	0	0	0	0	0	0	16
% Approach Total	0.0	100.0	0.0	0.0	0.0		12.5	0.0	87.5	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	50.0	33.3	16.7	0.0		0.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.250	0.000	0.000	0.000	0.250	0.250	0.000	0.438	0.000	0.000	0.400	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.500	0.250	0.000	0.300	0.000	0.000	0.000	0.000	0.000	0.000	0.667
Buses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Buses %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Single-Unit Trucks	0	2	0	0	0	2	1	0	6	0	0	7	0	0	0	0	0	0	0	2	2	1	0	5	0	0	0	0	0	0	14
Single-Unit %	0.0	100.0	0.0	0.0	0.0	100.0	100.0	0.0	85.7	0.0	0.0	87.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	66.7	100.0	100.0	0.0	83.3	0.0	0.0	0.0	0.0	0.0	0.0	87.5
Articulated Trucks	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	2
Articulated %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	14.3	0.0	0.0	12.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	33.3	0.0	0.0	0.0	16.7	0.0	0.0	0.0	0.0	0.0	0.0	12.5
Buses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Single-Unit Trucks	0	2	0	0	0	2	1	0	6	0	0	7	0	0	0	0	0	0	0	2	2	1	0	5	0	0	0	0	0	0	14
Articulated Trucks	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	2
Total Entering Leg	0	2	0	0	0	2	1	0	7	0	0	8	0	0	0	0	0	0	0	3	2	1	0	6	0	0	0	0	0	0	16
Buses													0												0						0
Single-Unit Trucks													2												8						14
Articulated Trucks													1												1						2
Total Exiting Leg	3						3						0						9						1						16



PDI File #: **207450 G**  
 Location: **N: Forest Street S: Forest Street**  
 Location: **E: Ryder Street W: Peirce Street SE: Driveway**  
 City, State: **Arlington, MA**  
 Client: **Nitsch Eng/B.Zimolka**  
 Site Code: **TBD**  
 Count Date: **Tuesday, February 4, 2020**  
 Start Time: **7:00 AM**  
 End Time: **9:00 AM**  
 Class:



### Buses

	Forest Street						Ryder Street						Driveway						Forest Street						Peirce Street						Total
	from North						from East						from Southeast						from South						from West						
	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Thru	Left	U-Turn	Total	Right	Bear Right	Thru	Left	U-Turn	Total	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Grand Total	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Approach %	100.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		
Total %	100.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total	0						0						0						0						1						1

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

8:00 AM	Forest Street						Ryder Street						Driveway						Forest Street						Peirce Street						Total
	from North						from East						from Southeast						from South						from West						
	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Thru	Left	U-Turn	Total	Right	Bear Right	Thru	Left	U-Turn	Total	
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
8:45 AM	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
Total Volume	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
% Approach Total	100.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		
PHF	0.250	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250		
Entering Leg	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
Exiting Leg	0						0						0						0						1						1
Total	1						0						0						0						1						2



PDI File #: **207450 G**  
 Location: **N: Forest Street S: Forest Street**  
 Location: **E: Ryder Street W: Peirce Street SE: Driveway**  
 City, State: **Arlington, MA**  
 Client: **Nitsch Eng/B.Zimolka**  
 Site Code: **TBD**  
 Count Date: **Tuesday, February 4, 2020**  
 Start Time: **7:00 AM**  
 End Time: **9:00 AM**  
 Class:



### Single-Unit Trucks

	Forest Street						Ryder Street						Driveway						Forest Street						Peirce Street						Total
	from North						from East						from Southeast						from South						from West						
	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Thru	Left	U-Turn	Total	Right	Bear Right	Thru	Left	U-Turn	Total	
7:00 AM	0	2	0	0	0	2	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
7:15 AM	0	0	0	0	0	0	1	0	3	0	0	4	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	5
7:30 AM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	2	1	1	0	4	0	0	0	0	0	0	5
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	2	0	0	0	2	1	0	6	0	0	7	0	0	0	0	0	0	0	2	2	1	0	5	0	0	0	0	0	0	14
8:00 AM	1	3	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
8:15 AM	0	1	0	0	0	1	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
8:30 AM	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	0	4
8:45 AM	0	1	0	0	0	1	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	3
Total	1	7	0	0	0	8	0	0	2	0	0	2	0	0	0	0	0	0	0	1	1	1	0	3	0	0	0	0	0	0	13
Grand Total	1	9	0	0	0	10	1	0	8	0	0	9	0	0	0	0	0	0	0	3	3	2	0	8	0	0	0	0	0	0	27
Approach %	10.0	90.0	0.0	0.0	0.0		11.1	0.0	88.9	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	37.5	37.5	25.0	0.0		0.0	0.0	0.0	0.0	0.0		
Total %	3.7	33.3	0.0	0.0	0.0	37.0	3.7	0.0	29.6	0.0	0.0	33.3	0.0	0.0	0.0	0.0	0.0	0.0		0.0	11.1	11.1	7.4	0.0	29.6	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total	4						3						0						17						3						27

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:00 AM	Forest Street						Ryder Street						Driveway						Forest Street						Peirce Street						Total
	from North						from East						from Southeast						from South						from West						
	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Thru	Left	U-Turn	Total	Right	Bear Right	Thru	Left	U-Turn	Total	
7:00 AM	0	2	0	0	0	2	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
7:15 AM	0	0	0	0	0	0	1	0	3	0	0	4	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	5
7:30 AM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	2	1	1	0	4	0	0	0	0	0	0	5
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	2	0	0	0	2	1	0	6	0	0	7	0	0	0	0	0	0	0	2	2	1	0	5	0	0	0	0	0	0	14
% Approach Total	0.0	100.0	0.0	0.0	0.0		14.3	0.0	85.7	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	40.0	40.0	20.0	0.0		0.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.250	0.000	0.000	0.000	0.250	0.250	0.000	0.500	0.000	0.000	0.438	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.500	0.250	0.000	0.313	0.000	0.000	0.000	0.000	0.000	0.000	0.700
Entering Leg	0	2	0	0	0	2	1	0	6	0	0	7	0	0	0	0	0	0	0	2	2	1	0	5	0	0	0	0	0	0	14
Exiting Leg	3						2						0						8						1						14
Total	5						9						0						13						1						28



PDI File #: **207450 G**  
 Location: **N: Forest Street S: Forest Street**  
 Location: **E: Ryder Street W: Peirce Street SE: Driveway**  
 City, State: **Arlington, MA**  
 Client: **Nitsch Eng/B.Zimolka**  
 Site Code: **TBD**  
 Count Date: **Tuesday, February 4, 2020**  
 Start Time: **7:00 AM**  
 End Time: **9:00 AM**  
 Class:



### Articulated Trucks

	Forest Street						Ryder Street						Driveway						Forest Street						Peirce Street						Total	
	from North						from East						from Southeast						from South						from West							
	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Thru	Left	U-Turn	Total	Right	Bear Right	Thru	Left	U-Turn	Total		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7:15 AM	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	1	
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	2
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Grand Total	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	2
Approach %	0.0	0.0	0.0	0.0	0.0		0.0	0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0			
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	50.0	0.0	0.0	50.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	50.0	0.0	0.0	0.0	50.0	0.0	0.0	0.0	0.0	0.0	0.0		
Exiting Leg Total	0						1						0						1						0						2	

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:00 AM	Forest Street						Ryder Street						Driveway						Forest Street						Peirce Street						Total	
	from North						from East						from Southeast						from South						from West							
	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Thru	Left	U-Turn	Total	Right	Bear Right	Thru	Left	U-Turn	Total		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7:15 AM	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	1	
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total Volume	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	2
% Approach Total	0.0	0.0	0.0	0.0	0.0		0.0	0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0			
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.500	
Entering Leg	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	2	
Exiting Leg	0						1						0						1						0						2	
Total	0						2						0						2						0						4	



PDI File #: **207450 G**  
 Location: **N: Forest Street S: Forest Street**  
 Location: **E: Ryder Street W: Peirce Street SE: Driveway**  
 City, State: **Arlington, MA**  
 Client: **Nitsch Eng/B.Zimolka**  
 Site Code: **TBD**  
 Count Date: **Tuesday, February 4, 2020**  
 Start Time: **7:00 AM**  
 End Time: **9:00 AM**  
 Class:



**Bicycles (on Roadway and Crosswalks)**

	Forest Street								Ryder Street								Driveway								Forest Street								Peirce Street								Total	
	from North								from East								from Southeast								from South								from West									
	Right	Thru	Bear Left	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	Hard Left	U-Turn	CW-SB	CW-NB	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	CW-SWB	CW-NWB	Total	Hard Right	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Bear Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Total	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1		
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3		
Grand Total	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	5		
Approach %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	40.0	0.0	0.0	0.0	0.0	40.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	60.0	0.0	0.0	0.0	0.0	0.0	0.0	60.0	0.0	0.0	0.0	0.0	0.0	0.0		
Exiting Leg Total	0								3								2								0								0								5	

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:45 AM	Forest Street								Ryder Street								Driveway								Forest Street								Peirce Street								Total
	from North								from East								from Southeast								from South								from West								
	Right	Thru	Bear Left	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	Hard Left	U-Turn	CW-SB	CW-NB	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	CW-SWB	CW-NWB	Total	Hard Right	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Bear Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total Volume	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	4
% Approach Total	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	100.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.500	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.500		
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	4	
Exiting Leg								0								2																							0	4	
Total								0								4										2												0	8		



PDI File #: **207450 G**  
 Location: **N: Forest Street S: Forest Street**  
 Location: **E: Ryder Street W: Peirce Street SE: Driveway**  
 City, State: **Arlington, MA**  
 Client: **Nitsch Eng/B.Zimolka**  
 Site Code: **TBD**  
 Count Date: **Tuesday, February 4, 2020**  
 Start Time: **7:00 AM**  
 End Time: **9:00 AM**  
 Class:



### Pedestrians

	Forest Street								Ryder Street								Driveway								Forest Street								Peirce Street								Total
	from North								from East								from Southeast								from South								from West								
	Right	Thru	Bear Left	Left	U-Turn	CW-SB	CW-WB	Total	Right	Thru	Left	Hard Left	U-Turn	CW-SB	CW-NB	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	CW-SWB	CW-NEB	Total	Hard Right	Right	Thru	Left	U-Turn	CW-WB	CW-SB	Total	Right	Bear Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	3
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	24	1	25	0	0	0	0	0	3	0	3	0	0	0	0	0	0	7	7	35
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	0	10	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	11	31
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	36	2	38	0	0	0	0	0	3	0	3	0	0	0	0	0	0	10	10	51
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1		
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	5	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	6	1	7	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	9	
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	42	3	45	0	0	0	0	0	3	0	3	0	0	0	0	0	0	11	11	60
Approach %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100		0	0	0	0	0	93.3	6.67		0	0	0	0	0	100	0		0	0	0	0	0	0	100		
Total %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1.67	1.67	0	0	0	0	0	70	5	75	0	0	0	0	0	5	0	5	0	0	0	0	0	18.3	18.3		
Exiting Leg Total	0								1								45								3								11								60

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:00 AM	Forest Street								Ryder Street								Driveway								Forest Street								Peirce Street								Total
	from North								from East								from Southeast								from South								from West								
	Right	Thru	Bear Left	Left	U-Turn	CW-SB	CW-WB	Total	Right	Thru	Left	Hard Left	U-Turn	CW-SB	CW-NB	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	CW-SWB	CW-NEB	Total	Hard Right	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Bear Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	3	
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	24	1	25	0	0	0	0	0	3	0	3	0	0	0	0	0	0	7	7	35
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	11	
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	36	2	38	0	0	0	0	0	3	0	3	0	0	0	0	0	0	10	10	51
% Approach Total	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	94.7	5.3		0.0	0.0	0.0	0.0	0.0	100.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	100.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.375	0.500	0.380	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.357	0.357	0.364	
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	36	2	38	0	0	0	0	0	3	0	3	0	0	0	0	0	0	10	10	51
Exiting Leg	0								0								38								3								10								51
Total	0								0								76								6								20								102



PDI File #: 207450 GG  
 Location: N: Forest Street S: Forest Street  
 Location: E: Ryder Street W: Peirce Street SE: Driveway  
 City, State: Arlington, MA  
 Client: Nitsch Eng/B.Zimolka  
 Site Code: TBD  
 Count Date: Tuesday, February 4, 2020  
 Start Time: 4:00 PM  
 End Time: 6:00 PM  
 Class:



### Cars and Heavy Vehicles (Combined)

	Forest Street						Ryder Street						Driveway						Forest Street						Peirce Street						Total
	from North						from East						from Southeast						from South						from West						
	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Thru	Left	U-Turn	Total	Right	Bear Right	Thru	Left	U-Turn	Total	
4:00 PM	0	30	0	1	0	31	1	0	3	0	0	4	0	0	0	0	0	0	0	2	43	0	0	45	1	0	0	1	0	2	82
4:15 PM	0	23	1	2	0	26	3	0	1	0	0	4	0	0	0	0	0	0	0	1	62	1	0	64	0	0	0	4	0	4	98
4:30 PM	0	31	0	0	0	31	3	0	2	0	0	5	0	2	0	1	0	3	0	3	47	1	0	51	0	0	0	1	0	1	91
4:45 PM	1	26	1	1	0	29	4	0	3	0	0	7	0	0	0	1	0	1	0	3	36	0	0	39	0	0	0	2	0	2	78
Total	1	110	2	4	0	117	11	0	9	0	0	20	0	2	0	2	0	4	0	9	188	2	0	199	1	0	0	8	0	9	349
5:00 PM	1	25	0	1	0	27	3	0	2	0	0	5	0	0	0	0	0	0	2	0	73	1	0	76	0	0	1	2	0	3	111
5:15 PM	1	16	0	2	0	19	1	0	1	0	0	2	0	0	0	1	0	1	0	0	72	1	0	73	0	0	0	1	0	1	96
5:30 PM	1	21	1	2	0	25	1	1	3	0	0	5	0	0	0	0	0	0	0	3	67	0	0	70	1	0	0	2	0	3	103
5:45 PM	2	28	0	0	0	30	0	0	3	0	0	3	0	0	0	0	0	0	0	1	61	2	0	64	1	0	0	2	0	3	100
Total	5	90	1	5	0	101	5	1	9	0	0	15	0	0	0	1	0	1	2	4	273	4	0	283	2	0	1	7	0	10	410
Grand Total	6	200	3	9	0	218	16	1	18	0	0	35	0	2	0	3	0	5	2	13	461	6	0	482	3	0	1	15	0	19	759
Approach %	2.8	91.7	1.4	4.1	0.0		45.7	2.9	51.4	0.0	0.0		0.0	40.0	0.0	60.0	0.0		0.4	2.7	95.6	1.2	0.0		15.8	0.0	5.3	78.9	0.0		
Total %	0.8	26.4	0.4	1.2	0.0	28.7	2.1	0.1	2.4	0.0	0.0	4.6	0.0	0.3	0.0	0.4	0.0	0.7	0.3	1.7	60.7	0.8	0.0	63.5	0.4	0.0	0.1	2.0	0.0	2.5	
Exiting Leg Total	494						23						5						224						13						759
Cars	6	200	3	8	0	217	16	1	18	0	0	35	0	2	0	3	0	5	2	9	458	6	0	475	3	0	1	15	0	19	751
% Cars	100.0	100.0	100.0	88.9	0.0	99.5	100.0	100.0	100.0	0.0	0.0	100.0	0.0	100.0	0.0	100.0	0.0	100.0	100.0	69.2	99.3	100.0	0.0	98.5	100.0	0.0	100.0	100.0	0.0	100.0	98.9
Exiting Leg Total	491						18						5						224						13						751
Heavy Vehicles	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	4	3	0	0	7	0	0	0	0	0	0	8
% Heavy Vehicles	0.0	0.0	0.0	11.1	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	30.8	0.7	0.0	0.0	1.5	0.0	0.0	0.0	0.0	0.0	0.0	1.1
Exiting Leg Total	3						5						0						0						0						8

### Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

5:00 PM	Forest Street						Ryder Street						Driveway						Forest Street						Peirce Street						Total
	from North						from East						from Southeast						from South						from West						
	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Thru	Left	U-Turn	Total	Right	Bear Right	Thru	Left	U-Turn	Total	
5:00 PM	1	25	0	1	0	27	3	0	2	0	0	5	0	0	0	0	0	0	2	0	73	1	0	76	0	0	1	2	0	3	111
5:15 PM	1	16	0	2	0	19	1	0	1	0	0	2	0	0	0	1	0	1	0	0	72	1	0	73	0	0	0	1	0	1	96
5:30 PM	1	21	1	2	0	25	1	1	3	0	0	5	0	0	0	0	0	0	0	3	67	0	0	70	1	0	0	2	0	3	103
5:45 PM	2	28	0	0	0	30	0	0	3	0	0	3	0	0	0	0	0	0	0	1	61	2	0	64	1	0	0	2	0	3	100
Total Volume	5	90	1	5	0	101	5	1	9	0	0	15	0	0	0	1	0	1	2	4	273	4	0	283	2	0	1	7	0	10	410
% Approach Total	5.0	89.1	1.0	5.0	0.0		33.3	6.7	60.0	0.0	0.0		0.0	0.0	0.0	100.0	0.0		0.7	1.4	96.5	1.4	0.0		20.0	0.0	10.0	70.0	0.0		
PHF	0.625	0.804	0.250	0.625	0.000	0.842	0.417	0.250	0.750	0.000	0.000	0.750	0.000	0.000	0.000	0.250	0.000	0.250	0.250	0.333	0.935	0.500	0.000	0.931	0.500	0.000	0.250	0.875	0.000	0.833	0.923
Cars	5	90	1	5	0	101	5	1	9	0	0	15	0	0	0	1	0	1	2	3	271	4	0	280	2	0	1	7	0	10	407
Cars %	100.0	100.0	100.0	100.0	0.0	100.0	100.0	100.0	100.0	0.0	0.0	100.0	0.0	0.0	0.0	100.0	0.0	100.0	100.0	75.0	99.3	100.0	0.0	98.9	100.0	0.0	100.0	100.0	0.0	100.0	99.3
Heavy Vehicles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0	0	3	0	0	0	0	0	0	3
Heavy Vehicles %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25.0	0.7	0.0	0.0	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.7
Cars Enter Leg	5	90	1	5	0	101	5	1	9	0	0	15	0	0	0	1	0	1	2	3	271	4	0	280	2	0	1	7	0	10	407
Heavy Enter Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0	0	3	0	0	0	0	0	0	3
Total Entering Leg	5	90	1	5	0	101	5	1	9	0	0	15	0	0	0	1	0	1	2	4	273	4	0	283	2	0	1	7	0	10	410
Cars Exiting Leg	283						9						3						102						10						407
Heavy Exiting Leg	2						1						0						0						0						3
Total Exiting Leg	285						10						3						102						10						410



PDI File #: **207450 GG**  
 Location: **N: Forest Street S: Forest Street**  
 Location: **E: Ryder Street W: Peirce Street SE: Driveway**  
 City, State: **Arlington, MA**  
 Client: **Nitsch Eng/B.Zimolka**  
 Site Code: **TBD**  
 Count Date: **Tuesday, February 4, 2020**  
 Start Time: **4:00 PM**  
 End Time: **6:00 PM**  
 Class:



### Cars

	Forest Street						Ryder Street						Driveway						Forest Street						Peirce Street						Total
	from North						from East						from Southeast						from South						from West						
	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Thru	Left	U-Turn	Total	Right	Bear Right	Thru	Left	U-Turn	Total	
4:00 PM	0	30	0	0	0	30	1	0	3	0	0	4	0	0	0	0	0	0	0	1	42	0	0	43	1	0	0	1	0	2	79
4:15 PM	0	23	1	2	0	26	3	0	1	0	0	4	0	0	0	0	0	0	0	0	62	1	0	63	0	0	0	4	0	4	97
4:30 PM	0	31	0	0	0	31	3	0	2	0	0	5	0	2	0	1	0	3	0	3	47	1	0	51	0	0	0	1	0	1	91
4:45 PM	1	26	1	1	0	29	4	0	3	0	0	7	0	0	0	1	0	1	0	2	36	0	0	38	0	0	0	2	0	2	77
Total	1	110	2	3	0	116	11	0	9	0	0	20	0	2	0	2	0	4	0	6	187	2	0	195	1	0	0	8	0	9	344
5:00 PM	1	25	0	1	0	27	3	0	2	0	0	5	0	0	0	0	0	0	2	0	71	1	0	74	0	0	1	2	0	3	109
5:15 PM	1	16	0	2	0	19	1	0	1	0	0	2	0	0	0	1	0	1	0	0	72	1	0	73	0	0	0	1	0	1	96
5:30 PM	1	21	1	2	0	25	1	1	3	0	0	5	0	0	0	0	0	0	0	2	67	0	0	69	1	0	0	2	0	3	102
5:45 PM	2	28	0	0	0	30	0	0	3	0	0	3	0	0	0	0	0	0	0	1	61	2	0	64	1	0	0	2	0	3	100
Total	5	90	1	5	0	101	5	1	9	0	0	15	0	0	0	1	0	1	2	3	271	4	0	280	2	0	1	7	0	10	407
Grand Total	6	200	3	8	0	217	16	1	18	0	0	35	0	2	0	3	0	5	2	9	458	6	0	475	3	0	1	15	0	19	751
Approach %	2.8	92.2	1.4	3.7	0.0		45.7	2.9	51.4	0.0	0.0		0.0	40.0	0.0	60.0	0.0		0.4	1.9	96.4	1.3	0.0		15.8	0.0	5.3	78.9	0.0		
Total %	0.8	26.6	0.4	1.1	0.0	28.9	2.1	0.1	2.4	0.0	0.0	4.7	0.0	0.3	0.0	0.4	0.0	0.7	0.3	1.2	61.0	0.8	0.0	63.2	0.4	0.0	0.1	2.0	0.0	2.5	
Exiting Leg Total	491						18						5						224						13						751

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

5:00 PM	Forest Street						Ryder Street						Driveway						Forest Street						Peirce Street						Total
	from North						from East						from Southeast						from South						from West						
	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Thru	Left	U-Turn	Total	Right	Bear Right	Thru	Left	U-Turn	Total	
5:00 PM	1	25	0	1	0	27	3	0	2	0	0	5	0	0	0	0	0	0	2	0	71	1	0	74	0	0	1	2	0	3	109
5:15 PM	1	16	0	2	0	19	1	0	1	0	0	2	0	0	0	1	0	1	0	0	72	1	0	73	0	0	0	1	0	1	96
5:30 PM	1	21	1	2	0	25	1	1	3	0	0	5	0	0	0	0	0	0	0	2	67	0	0	69	1	0	0	2	0	3	102
5:45 PM	2	28	0	0	0	30	0	0	3	0	0	3	0	0	0	0	0	0	0	1	61	2	0	64	1	0	0	2	0	3	100
Total Volume	5	90	1	5	0	101	5	1	9	0	0	15	0	0	0	1	0	1	2	3	271	4	0	280	2	0	1	7	0	10	407
% Approach Total	5.0	89.1	1.0	5.0	0.0		33.3	6.7	60.0	0.0	0.0		0.0	0.0	0.0	100.0	0.0		0.7	1.1	96.8	1.4	0.0		20.0	0.0	10.0	70.0	0.0		
PHF	0.625	0.804	0.250	0.625	0.000	0.842	0.417	0.250	0.750	0.000	0.000	0.750	0.000	0.000	0.000	0.250	0.000	0.250	0.250	0.375	0.941	0.500	0.000	0.946	0.500	0.000	0.250	0.875	0.000	0.833	0.933
Entering Leg	5	90	1	5	0	101	5	1	9	0	0	15	0	0	0	1	0	1	2	3	271	4	0	280	2	0	1	7	0	10	407
Exiting Leg						283						9						3						102						10	407
Total						384						24						4						382						20	814



PDI File #: 207450 GG  
 Location: N: Forest Street S: Forest Street  
 Location: E: Ryder Street W: Peirce Street SE: Driveway  
 City, State: Arlington, MA  
 Client: Nitsch Eng/B.Zimolka  
 Site Code: TBD  
 Count Date: Tuesday, February 4, 2020  
 Start Time: 4:00 PM  
 End Time: 6:00 PM  
 Class:



### Heavy Vehicles-Combined (Buses, Single-Unit Trucks, Articulated Trucks)

	Forest Street						Ryder Street						Driveway						Forest Street						Peirce Street						Total	
	from North						from East						from Southeast						from South						from West							
	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Thru	Left	U-Turn	Total	Right	Bear Right	Thru	Left	U-Turn	Total		
4:00 PM	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	0	3
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	1
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	1
Total	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	1	0	0	4	0	0	0	0	0	0	5
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	2
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	1
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0	0	3	0	0	0	0	0	0	0	3
Grand Total	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	4	3	0	0	7	0	0	0	0	0	0	0	8
Approach %	0.0	0.0	0.0	100.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	57.1	42.9	0.0	0.0		0.0	0.0	0.0	0.0	0.0			
Total %	0.0	0.0	0.0	12.5	0.0	12.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	50.0	37.5	0.0	0.0	87.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total	3						5						0						0						0						8	
Buses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Buses	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total	0						0						0						0						0						0	
Single-Unit Trucks	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	4	3	0	0	7	0	0	0	0	0	0	0	8
% Single-Unit	0.0	0.0	0.0	100.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	100.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	
Exiting Leg Total	3						5						0						0						0						8	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Articulated	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total	0						0						0						0						0						0	

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Forest Street						Ryder Street						Driveway						Forest Street						Peirce Street						Total	
	from North						from East						from Southeast						from South						from West							
	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Thru	Left	U-Turn	Total	Right	Bear Right	Thru	Left	U-Turn	Total		
4:00 PM	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	0	3
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	1	
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	1	
Total Volume	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	3	1	0	0	4	0	0	0	0	0	0	0	5
% Approach Total	0.0	0.0	0.0	100.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	75.0	25.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0			
PHF	0.000	0.000	0.000	0.250	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.750	0.250	0.000	0.000	0.500	0.000	0.000	0.000	0.000	0.000	0.000	0.417	
Buses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Buses %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Single-Unit Trucks	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	3	1	0	0	4	0	0	0	0	0	0	0	5
Single-Unit %	0.0	0.0	0.0	100.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	100.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Articulated %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Buses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Single-Unit Trucks	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	3	1	0	0	4	0	0	0	0	0	0	0	5
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total Entering Leg	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	3	1	0	0	4	0	0	0	0	0	0	0	5
Buses	0						0						0						0						0						0	
Single-Unit Trucks	1						4						0						0						0						5	
Articulated Trucks	0						0						0						0						0						0	
Total Exiting Leg	1						4						0																			



PDI File #: **207450 GG**  
 Location: **N: Forest Street S: Forest Street**  
 Location: **E: Ryder Street W: Peirce Street SE: Driveway**  
 City, State: **Arlington, MA**  
 Client: **Nitsch Eng/B.Zimolka**  
 Site Code: **TBD**  
 Count Date: **Tuesday, February 4, 2020**  
 Start Time: **4:00 PM**  
 End Time: **6:00 PM**  
 Class:



### Buses

	Forest Street						Ryder Street						Driveway						Forest Street						Peirce Street						Total
	from North						from East						from Southeast						from South						from West						
	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Thru	Left	U-Turn	Total	Right	Bear Right	Thru	Left	U-Turn	Total	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Exiting Leg Total	0						0						0						0						0						

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Forest Street						Ryder Street						Driveway						Forest Street						Peirce Street						Total
	from North						from East						from Southeast						from South						from West						
	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Thru	Left	U-Turn	Total	Right	Bear Right	Thru	Left	U-Turn	Total	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
% Approach Total	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Exiting Leg	0						0						0						0						0						0
Total	0						0						0						0						0						0



PDI File #: **207450 GG**  
 Location: **N: Forest Street S: Forest Street**  
 Location: **E: Ryder Street W: Peirce Street SE: Driveway**  
 City, State: **Arlington, MA**  
 Client: **Nitsch Eng/B.Zimolka**  
 Site Code: **TBD**  
 Count Date: **Tuesday, February 4, 2020**  
 Start Time: **4:00 PM**  
 End Time: **6:00 PM**  
 Class:



### Single-Unit Trucks

	Forest Street						Ryder Street						Driveway						Forest Street						Peirce Street						Total	
	from North						from East						from Southeast						from South						from West							
	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Thru	Left	U-Turn	Total	Right	Bear Right	Thru	Left	U-Turn	Total		
4:00 PM	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	0	3
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	1
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	1
Total	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	1	0	0	4	0	0	0	0	0	0	5
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	2
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	1
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0	0	3	0	0	0	0	0	0	0	3
Grand Total	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	4	3	0	0	7	0	0	0	0	0	0	0	8
Approach %	0.0	0.0	0.0	100.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	57.1	42.9	0.0	0.0		0.0	0.0	0.0	0.0	0.0			
Total %	0.0	0.0	0.0	12.5	0.0	12.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	50.0	37.5	0.0	0.0	87.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total	3						5						0						0						0						8	

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Forest Street						Ryder Street						Driveway						Forest Street						Peirce Street						Total		
	from North						from East						from Southeast						from South						from West								
	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Thru	Left	U-Turn	Total	Right	Bear Right	Thru	Left	U-Turn	Total			
4:00 PM	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	2	0	0	0	0	0	0	3
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	1	
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	1	
Total Volume	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	3	1	0	0	0	4	0	0	0	0	0	0	5	
% Approach Total	0.0	0.0	0.0	100.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	75.0	25.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0				
PHF	0.000	0.000	0.000	0.250	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.750	0.250	0.000	0.000	0.500	0.000	0.000	0.000	0.000	0.000	0.000	0.417		
Entering Leg	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	3	1	0	0	4	0	0	0	0	0	0	5		
Exiting Leg	1						4						0						0						0						5		
Total	2						4						0						4						0						10		



PDI File #: **207450 GG**  
 Location: **N: Forest Street S: Forest Street**  
 Location: **E: Ryder Street W: Peirce Street SE: Driveway**  
 City, State: **Arlington, MA**  
 Client: **Nitsch Eng/B.Zimolka**  
 Site Code: **TBD**  
 Count Date: **Tuesday, February 4, 2020**  
 Start Time: **4:00 PM**  
 End Time: **6:00 PM**  
 Class:



### Articulated Trucks

	Forest Street						Ryder Street						Driveway						Forest Street						Peirce Street						Total
	from North						from East						from Southeast						from South						from West						
	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Thru	Left	U-Turn	Total	Right	Bear Right	Thru	Left	U-Turn	Total	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Exiting Leg Total	0						0						0						0						0						

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Forest Street						Ryder Street						Driveway						Forest Street						Peirce Street						Total
	from North						from East						from Southeast						from South						from West						
	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Thru	Left	U-Turn	Total	Right	Bear Right	Thru	Left	U-Turn	Total	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
% Approach Total	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Exiting Leg	0						0						0						0						0						0
Total	0						0						0						0						0						0



PDI File #: **207450 GG**  
 Location: **N: Forest Street S: Forest Street**  
 Location: **E: Ryder Street W: Peirce Street SE: Driveway**  
 City, State: **Arlington, MA**  
 Client: **Nitsch Eng/B.Zimolka**  
 Site Code: **TBD**  
 Count Date: **Tuesday, February 4, 2020**  
 Start Time: **4:00 PM**  
 End Time: **6:00 PM**  
 Class:



### Bicycles (on Roadway and Crosswalks)

	Forest Street								Ryder Street								Driveway								Forest Street								Peirce Street								Total
	from North								from East								from Southeast								from South								from West								
	Right	Thru	Bear Left	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	Hard Left	U-Turn	CW-SB	CW-NB	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	CW-SWB	CW-NWB	Total	Hard Right	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Bear Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
5:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
Total	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	2	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	3	
Grand Total	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	2	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	4	
Approach %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	50.0	50.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25.0	25.0	0.0	0.0	0.0	0.0	50.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25.0	0.0	0.0	25.0	0.0	0.0	0.0	0.0	25.0	0.0	0.0	25.0	0.0		
Exiting Leg Total	0								2								0								1								1								4

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

5:00 PM	Forest Street								Ryder Street								Driveway								Forest Street								Peirce Street								Total		
	from North								from East								from Southeast								from South								from West										
	Right	Thru	Bear Left	Left	U-Turn	CW-SB	CW-WB	Total	Right	Thru	Left	Hard Left	U-Turn	CW-SB	CW-NB	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	CW-SWB	CW-NWB	Total	Hard Right	Right	Thru	Left	U-Turn	CW-WB	CW-SB	Total	Right	Bear Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total			
5:00 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
5:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1		
Total Volume	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	3		
% Approach Total	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0	50.0	50.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0				
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000		0.000	0.250	0.250	0.000	0.000	0.000	0.500		0.000	0.000	0.000	0.000	0.000	0.000	0.000		0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.250		0.000	0.000	0.000	0.000	0.000	0.000	0.000		0.375
Entering Leg	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	2	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1	3		
Exiting Leg											0						0										1													3			
Total											0					3											2											1		6			



PDI File #: **207450 GG**  
 Location: **N: Forest Street S: Forest Street**  
 Location: **E: Ryder Street W: Peirce Street SE: Driveway**  
 City, State: **Arlington, MA**  
 Client: **Nitsch Eng/B.Zimolka**  
 Site Code: **TBD**  
 Count Date: **Tuesday, February 4, 2020**  
 Start Time: **4:00 PM**  
 End Time: **6:00 PM**  
 Class:



### Pedestrians

	Forest Street								Ryder Street								Driveway								Forest Street								Peirce Street								Total	
	from North								from East								from Southeast								from South								from West									
	Right	Thru	Bear Left	Left	U-Turn	CW-SB	CW-WB	Total	Right	Thru	Left	Hard Left	U-Turn	CW-SB	CW-NB	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	CW-SWB	CW-NEB	Total	Hard Right	Right	Thru	Left	U-Turn	CW-WB	CW-SB	Total	Right	Bear Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total		
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	4
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	4	0	4	5		
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	3	3	6	0	0	0	0	0	1	0	1	0	0	0	0	5	0	5	13	
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	3	3	0	0	0	0	0	0	0	1	1	0	0	0	0	1	1	6	
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	3	0	0	0	0	0	0	0	0	0	0	0	0	1	1	4		
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1		
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	0	0	0	2	4	6	0	0	0	0	0	0	1	1	0	0	0	0	0	2	2	11	
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	1	2	3	3	0	0	0	0	0	0	5	7	12	0	0	0	0	0	1	1	2	0	0	0	0	5	2	7	24	
Approach %	0	0	0	0	0	0	0	0	0	0	0	0	33.3	66.7			0	0	0	0	0	0	41.7	58.3		0	0	0	0	0	50	50	0	0	0	0	0	71.4	28.6			
Total %	0	0	0	0	0	0	0	0	0	0	0	0	4.17	8.33	12.5		0	0	0	0	0	0	20.8	29.2	50	0	0	0	0	0	4.17	4.17	8.33	0	0	0	0	20.8	8.33	29.2		
Exiting Leg Total	0								3								12								2								7								24	

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:15 PM	Forest Street								Ryder Street								Driveway								Forest Street								Peirce Street								Total
	from North								from East								from Southeast								from South								from West								
	Right	Thru	Bear Left	Left	U-Turn	CW-SB	CW-WB	Total	Right	Thru	Left	Hard Left	U-Turn	CW-SB	CW-NB	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	CW-SWB	CW-NEB	Total	Hard Right	Right	Thru	Left	U-Turn	CW-WB	CW-SB	Total	Right	Bear Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	4	0	4	5	
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2		
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2		
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	0	0	0	0	0	0	3	3	0	0	0	0	0	0	1	1	0	0	0	0	1	1	6		
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	0	0	0	0	0	2	6	8	0	0	0	0	0	0	1	1	0	0	0	0	4	1	5	15	
% Approach Total	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	100.0	0.0		0.0	0.0	0.0	0.0	0.0	25.0	75.0		0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	80.0	20.0				
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.250		0.000	0.000	0.000	0.000	0.000	0.500	0.500	0.667	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.250	0.000	0.000	0.000	0.000	0.250	0.250	0.313	0.625	
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	0	0	0	0	0	2	6	8	0	0	0	0	0	0	1	1	0	0	0	4	1	5	15		
Exiting Leg	0								1								8								1								5								15
Total	0								2								16								2								10								30



PDI File #: **207450 H**  
 Location: **N: Ryder Street S: Ryder Street**  
 Location: **E: Mirak Mill Park South Driveway**  
 City, State: **Arlington, MA**  
 Client: **Nitsch Eng/B.Zimolka**  
 Site Code: **TBD**  
 Count Date: **Tuesday, February 4, 2020**  
 Start Time: **7:00 AM**  
 End Time: **9:00 AM**  
 Class:



### Cars and Heavy Vehicles (Combined)

	Ryder Street				Mirak Mill Park South Driveway				Ryder Street				Total
	from North				from East				from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
7:00 AM	1	1	0	2	0	5	0	5	1	3	0	4	11
7:15 AM	6	0	0	6	0	2	0	2	0	1	0	1	9
7:30 AM	4	0	0	4	0	0	0	0	4	3	0	7	11
7:45 AM	1	1	0	2	1	1	0	2	3	2	0	5	9
Total	12	2	0	14	1	8	0	9	8	9	0	17	40
8:00 AM	3	0	0	3	0	1	0	1	5	2	0	7	11
8:15 AM	1	3	0	4	0	0	0	0	1	0	0	1	5
8:30 AM	1	0	0	1	0	1	0	1	3	0	0	3	5
8:45 AM	0	0	0	0	0	2	0	2	0	2	0	2	4
Total	5	3	0	8	0	4	0	4	9	4	0	13	25
Grand Total	17	5	0	22	1	12	0	13	17	13	0	30	65
Approach %	77.3	22.7	0.0		7.7	92.3	0.0		56.7	43.3	0.0		
Total %	26.2	7.7	0.0	33.8	1.5	18.5	0.0	20.0	26.2	20.0	0.0	46.2	
Exiting Leg Total				14				22				29	65
Cars	11	5	0	16	1	9	0	10	15	12	0	27	53
% Cars	64.7	100.0	0.0	72.7	100.0	75.0	0.0	76.9	88.2	92.3	0.0	90.0	81.5
Exiting Leg Total				13				20				20	53
Heavy Vehicles	6	0	0	6	0	3	0	3	2	1	0	3	12
% Heavy Vehicles	35.3	0.0	0.0	27.3	0.0	25.0	0.0	23.1	11.8	7.7	0.0	10.0	18.5
Exiting Leg Total				1				2				9	12

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:00 AM	Ryder Street				Mirak Mill Park South Driveway				Ryder Street				Total
	from North				from East				from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
7:00 AM	1	1	0	2	0	5	0	5	1	3	0	4	11
7:15 AM	6	0	0	6	0	2	0	2	0	1	0	1	9
7:30 AM	4	0	0	4	0	0	0	0	4	3	0	7	11
7:45 AM	1	1	0	2	1	1	0	2	3	2	0	5	9
Total Volume	12	2	0	14	1	8	0	9	8	9	0	17	40
% Approach Total	85.7	14.3	0.0		11.1	88.9	0.0		47.1	52.9	0.0		
PHF	0.500	0.500	0.000	0.583	0.250	0.400	0.000	0.450	0.500	0.750	0.000	0.607	0.909
Cars	7	2	0	9	1	6	0	7	7	8	0	15	31
Cars %	58.3	100.0	0.0	64.3	100.0	75.0	0.0	77.8	87.5	88.9	0.0	88.2	77.5
Heavy Vehicles	5	0	0	5	0	2	0	2	1	1	0	2	9
Heavy Vehicles %	41.7	0.0	0.0	35.7	0.0	25.0	0.0	22.2	12.5	11.1	0.0	11.8	22.5
Cars Enter Leg	7	2	0	9	1	6	0	7	7	8	0	15	31
Heavy Enter Leg	5	0	0	5	0	2	0	2	1	1	0	2	9
Total Entering Leg	12	2	0	14	1	8	0	9	8	9	0	17	40
Cars Exiting Leg				9				9				13	31
Heavy Exiting Leg				1				1				7	9
Total Exiting Leg				10				10				20	40



PDI File #: **207450 H**  
 Location: **N: Ryder Street S: Ryder Street**  
 Location: **E: Mirak Mill Park South Driveway**  
 City, State: **Arlington, MA**  
 Client: **Nitsch Eng/B.Zimolka**  
 Site Code: **TBD**  
 Count Date: **Tuesday, February 4, 2020**  
 Start Time: **7:00 AM**  
 End Time: **9:00 AM**  
 Class:



**Cars**

	Ryder Street				Mirak Mill Park South Driveway				Ryder Street				Total
	from North				from East				from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
7:00 AM	0	1	0	1	0	4	0	4	1	3	0	4	9
7:15 AM	3	0	0	3	0	1	0	1	0	1	0	1	5
7:30 AM	3	0	0	3	0	0	0	0	3	2	0	5	8
7:45 AM	1	1	0	2	1	1	0	2	3	2	0	5	9
Total	7	2	0	9	1	6	0	7	7	8	0	15	31
8:00 AM	3	0	0	3	0	1	0	1	5	2	0	7	11
8:15 AM	0	3	0	3	0	0	0	0	1	0	0	1	4
8:30 AM	1	0	0	1	0	1	0	1	2	0	0	2	4
8:45 AM	0	0	0	0	0	1	0	1	0	2	0	2	3
Total	4	3	0	7	0	3	0	3	8	4	0	12	22
Grand Total	11	5	0	16	1	9	0	10	15	12	0	27	53
Approach %	68.8	31.3	0.0		10.0	90.0	0.0		55.6	44.4	0.0		
Total %	20.8	9.4	0.0	30.2	1.9	17.0	0.0	18.9	28.3	22.6	0.0	50.9	
Exiting Leg Total	13				20				20				53

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:15 AM	Ryder Street				Mirak Mill Park South Driveway				Ryder Street				Total
	from North				from East				from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
7:15 AM	3	0	0	3	0	1	0	1	0	1	0	1	5
7:30 AM	3	0	0	3	0	0	0	0	3	2	0	5	8
7:45 AM	1	1	0	2	1	1	0	2	3	2	0	5	9
8:00 AM	3	0	0	3	0	1	0	1	5	2	0	7	11
Total Volume	10	1	0	11	1	3	0	4	11	7	0	18	33
% Approach Total	90.9	9.1	0.0		25.0	75.0	0.0		61.1	38.9	0.0		
PHF	0.833	0.250	0.000	0.917	0.250	0.750	0.000	0.500	0.550	0.875	0.000	0.643	0.750
Entering Leg	10	1	0	11	1	3	0	4	11	7	0	18	33
Exiting Leg				8				12				13	33
Total				19				16				31	66



PDI File #: **207450 H**  
 Location: **N: Ryder Street S: Ryder Street**  
 Location: **E: Mirak Mill Park South Driveway**  
 City, State: **Arlington, MA**  
 Client: **Nitsch Eng/B.Zimolka**  
 Site Code: **TBD**  
 Count Date: **Tuesday, February 4, 2020**  
 Start Time: **7:00 AM**  
 End Time: **9:00 AM**



Class: **Heavy Vehicles-Combined (Buses, Single-Unit Trucks, Articulated Trucks)**

	Ryder Street				Mirak Mill Park South Driveway				Ryder Street				Total
	from North				from East				from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
7:00 AM	1	0	0	1	0	1	0	1	0	0	0	0	2
7:15 AM	3	0	0	3	0	1	0	1	0	0	0	0	4
7:30 AM	1	0	0	1	0	0	0	0	1	1	0	2	3
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	5	0	0	5	0	2	0	2	1	1	0	2	9
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	1	0	0	1	0	0	0	0	0	0	0	0	1
8:30 AM	0	0	0	0	0	0	0	0	1	0	0	1	1
8:45 AM	0	0	0	0	0	1	0	1	0	0	0	0	1
Total	1	0	0	1	0	1	0	1	1	0	0	1	3
Grand Total	6	0	0	6	0	3	0	3	2	1	0	3	12
Approach %	100.0	0.0	0.0		0.0	100.0	0.0		66.7	33.3	0.0		
Total %	50.0	0.0	0.0	50.0	0.0	25.0	0.0	25.0	16.7	8.3	0.0	25.0	
Exiting Leg Total	1				2				9				12
Buses	0	0	0	0	0	0	0	0	0	0	0	0	0
% Buses	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Exiting Leg Total	0				0				0				0
Single-Unit Trucks	5	0	0	5	0	3	0	3	1	1	0	2	10
% Single-Unit	83.3	0.0	0.0	83.3	0.0	100.0	0.0	100.0	50.0	100.0	0.0	66.7	83.3
Exiting Leg Total	1				1				8				10
Articulated Trucks	1	0	0	1	0	0	0	0	1	0	0	1	2
% Articulated	16.7	0.0	0.0	16.7	0.0	0.0	0.0	0.0	50.0	0.0	0.0	33.3	16.7
Exiting Leg Total	0				1				1				2

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:00 AM	Ryder Street				Mirak Mill Park South Driveway				Ryder Street				Total
	from North				from East				from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
7:00 AM	1	0	0	1	0	1	0	1	0	0	0	0	2
7:15 AM	3	0	0	3	0	1	0	1	0	0	0	0	4
7:30 AM	1	0	0	1	0	0	0	0	1	1	0	2	3
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	5	0	0	5	0	2	0	2	1	1	0	2	9
% Approach Total	100.0	0.0	0.0		0.0	100.0	0.0		50.0	50.0	0.0		
PHF	0.417	0.000	0.000	0.417	0.000	0.500	0.000	0.500	0.250	0.250	0.000	0.250	0.563
Buses	0	0	0	0	0	0	0	0	0	0	0	0	0
Buses %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Single-Unit Trucks	4	0	0	4	0	2	0	2	0	1	0	1	7
Single-Unit %	80.0	0.0	0.0	80.0	0.0	100.0	0.0	100.0	0.0	100.0	0.0	50.0	77.8
Articulated Trucks	1	0	0	1	0	0	0	0	1	0	0	1	2
Articulated %	20.0	0.0	0.0	20.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	50.0	22.2
Buses	0	0	0	0	0	0	0	0	0	0	0	0	0
Single-Unit Trucks	4	0	0	4	0	2	0	2	0	1	0	1	7
Articulated Trucks	1	0	0	1	0	0	0	0	1	0	0	1	2
Total Entering Leg	5	0	0	5	0	2	0	2	1	1	0	2	9
Buses				0				0				0	0
Single-Unit Trucks				1				0				6	7
Articulated Trucks				0				1				1	2
Total Exiting Leg				1				1				7	9



PDI File #: **207450 H**  
 Location: **N: Ryder Street S: Ryder Street**  
 Location: **E: Mirak Mill Park South Driveway**  
 City, State: **Arlington, MA**  
 Client: **Nitsch Eng/B.Zimolka**  
 Site Code: **TBD**  
 Count Date: **Tuesday, February 4, 2020**  
 Start Time: **7:00 AM**  
 End Time: **9:00 AM**  
 Class:



### Buses

	Ryder Street				Mirak Mill Park South Driveway				Ryder Street				Total	
	from North				from East				from South					
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	
Approach %	0.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0			
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Exiting Leg Total	0				0				0				0	

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:00 AM	Ryder Street				Mirak Mill Park South Driveway				Ryder Street				Total
	from North				from East				from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0
% Approach Total	0.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0
Exiting Leg				0				0				0	0
Total				0				0				0	0



PDI File #: **207450 H**  
 Location: **N: Ryder Street S: Ryder Street**  
 Location: **E: Mirak Mill Park South Driveway**  
 City, State: **Arlington, MA**  
 Client: **Nitsch Eng/B.Zimolka**  
 Site Code: **TBD**  
 Count Date: **Tuesday, February 4, 2020**  
 Start Time: **7:00 AM**  
 End Time: **9:00 AM**  
 Class:



### Single-Unit Trucks

	Ryder Street					Mirak Mill Park South Driveway					Ryder Street					Total
	from North					from East					from South					
	Thru	Left	U-Turn	Total		Right	Left	U-Turn	Total		Right	Thru	U-Turn	Total		
7:00 AM	1	0	0	1		0	1	0	1		0	0	0	0		2
7:15 AM	2	0	0	2		0	1	0	1		0	0	0	0		3
7:30 AM	1	0	0	1		0	0	0	0		0	1	0	1		2
7:45 AM	0	0	0	0		0	0	0	0		0	0	0	0		0
Total	4	0	0	4		0	2	0	2		0	1	0	1		7
8:00 AM	0	0	0	0		0	0	0	0		0	0	0	0		0
8:15 AM	1	0	0	1		0	0	0	0		0	0	0	0		1
8:30 AM	0	0	0	0		0	0	0	0		1	0	0	1		1
8:45 AM	0	0	0	0		0	1	0	1		0	0	0	0		1
Total	1	0	0	1		0	1	0	1		1	0	0	1		3
Grand Total	5	0	0	5		0	3	0	3		1	1	0	2		10
Approach %	100.0	0.0	0.0			0.0	100.0	0.0			50.0	50.0	0.0			
Total %	50.0	0.0	0.0	50.0		0.0	30.0	0.0	30.0		10.0	10.0	0.0	20.0		
Exiting Leg Total	1					1					8					10

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:00 AM	Ryder Street				Mirak Mill Park South Driveway				Ryder Street				Total
	from North				from East				from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
7:00 AM	1	0	0	1	0	1	0	1	0	0	0	0	2
7:15 AM	2	0	0	2	0	1	0	1	0	0	0	0	3
7:30 AM	1	0	0	1	0	0	0	0	0	1	0	1	2
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	4	0	0	4	0	2	0	2	0	1	0	1	7
% Approach Total	100.0	0.0	0.0		0.0	100.0	0.0		0.0	100.0	0.0		
PHF	0.500	0.000	0.000	0.500	0.000	0.500	0.000	0.500	0.000	0.250	0.000	0.250	0.583
Entering Leg	4	0	0	4	0	2	0	2	0	1	0	1	7
Exiting Leg				1				0				6	7
Total				5				2				7	14



PDI File #: **207450 H**  
 Location: **N: Ryder Street S: Ryder Street**  
 Location: **E: Mirak Mill Park South Driveway**  
 City, State: **Arlington, MA**  
 Client: **Nitsch Eng/B.Zimolka**  
 Site Code: **TBD**  
 Count Date: **Tuesday, February 4, 2020**  
 Start Time: **7:00 AM**  
 End Time: **9:00 AM**  
 Class:



### Articulated Trucks

	Ryder Street					Mirak Mill Park South Driveway					Ryder Street					Total
	from North					from East					from South					
	Thru	Left	U-Turn	Total		Right	Left	U-Turn	Total		Right	Thru	U-Turn	Total		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	1	0	0	1		0	0	0	0	0	0	0	0	0	0	1
7:30 AM	0	0	0	0		0	0	0	0	0	1	0	0	1		1
7:45 AM	0	0	0	0		0	0	0	0	0	0	0	0	0	0	0
Total	1	0	0	1		0	0	0	0	0	1	0	0	1		2
8:00 AM	0	0	0	0		0	0	0	0	0	0	0	0	0		0
8:15 AM	0	0	0	0		0	0	0	0	0	0	0	0	0		0
8:30 AM	0	0	0	0		0	0	0	0	0	0	0	0	0		0
8:45 AM	0	0	0	0		0	0	0	0	0	0	0	0	0		0
Total	0	0	0	0		0	0	0	0	0	0	0	0	0		0
Grand Total	1	0	0	1		0	0	0	0	0	1	0	0	1		2
Approach %	100.0	0.0	0.0			0.0	0.0	0.0			100.0	0.0	0.0			
Total %	50.0	0.0	0.0	50.0		0.0	0.0	0.0	0.0		50.0	0.0	0.0	50.0		
Exiting Leg Total	0					1					1					2

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:00 AM	Ryder Street				Mirak Mill Park South Driveway				Ryder Street				Total
	from North				from East				from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	1	0	0	1	0	0	0	0	0	0	0	0	1
7:30 AM	0	0	0	0	0	0	0	0	1	0	0	1	1
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	1	0	0	1	0	0	0	0	1	0	0	1	2
% Approach Total	100.0	0.0	0.0		0.0	0.0	0.0		100.0	0.0	0.0		
PHF	0.250	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.250	0.500
Entering Leg	1	0	0	1	0	0	0	0	1	0	0	1	2
Exiting Leg				0				1				1	2
Total				1				1				2	4



PDI File #: **207450 H**  
 Location: **N: Ryder Street S: Ryder Street**  
 Location: **E: Mirak Mill Park South Driveway**  
 City, State: **Arlington, MA**  
 Client: **Nitsch Eng/B.Zimolka**  
 Site Code: **TBD**



Count Date: **Tuesday, February 4, 2020**  
 Start Time: **7:00 AM**  
 End Time: **9:00 AM**

Class: **Bicycles (on Roadway and Crosswalks)**

	Ryder Street						Mirak Mill Park South Driveway						Ryder Street						Total	
	from North						from East						from South							
	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	U-Turn	CW-WB	CW-EB	Total		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	3	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Total	3	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
8:45 AM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	1	2
Total	0	1	0	0	0	1	0	0	0	0	0	0	0	0	3	0	0	0	3	4
Grand Total	3	1	0	0	0	4	0	0	0	0	0	0	0	0	3	0	0	0	3	7
Approach %	75.0	25.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0	0.0			
Total %	42.9	14.3	0.0	0.0	0.0	57.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	42.9	0.0	0.0	0.0	42.9		
Exiting Leg Total	3						1						3						7	

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:45 AM	Ryder Street						Mirak Mill Park South Driveway						Ryder Street						Total	
	from North						from East						from South							
	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	U-Turn	CW-WB	CW-EB	Total		
7:45 AM	3	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1
Total Volume	3	0	0	0	0	3	0	0	0	0	0	0	0	2	0	0	0	0	2	5
% Approach Total	100.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0	0.0			
PHF	0.250	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.500	0.000	0.000	0.000	0.500		0.417
Entering Leg	3	0	0	0	0	3	0	0	0	0	0	0	0	2	0	0	0	0	2	5
Exiting Leg	2						0						3						5	
Total	5						0						5						10	



PDI File #: **207450 H**  
 Location: **N: Ryder Street S: Ryder Street**  
 Location: **E: Mirak Mill Park South Driveway**  
 City, State: **Arlington, MA**  
 Client: **Nitsch Eng/B.Zimolka**  
 Site Code: **TBD**  
 Count Date: **Tuesday, February 4, 2020**  
 Start Time: **7:00 AM**  
 End Time: **9:00 AM**  
 Class:



### Pedestrians

	Ryder Street						Mirak Mill Park South Driveway						Ryder Street						Total	
	from North						from East						from South							
	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	U-Turn	CW-WB	CW-EB	Total		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1
7:15 AM	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1
7:30 AM	0	0	0	0	0	0	0	0	0	0	21	1	22	0	0	0	0	0	0	22
7:45 AM	0	0	0	0	0	0	0	0	0	0	8	0	8	0	0	0	0	0	0	8
Total	0	0	0	0	0	0	0	0	0	0	30	2	32	0	0	0	0	0	0	32
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1
8:45 AM	0	0	0	0	0	0	0	0	0	0	3	0	3	0	0	0	0	0	0	3
Total	0	0	0	0	0	0	0	0	0	0	3	1	4	0	0	0	0	0	0	4
Grand Total	0	0	0	0	0	0	0	0	0	0	33	3	36	0	0	0	0	0	0	36
Approach %	0	0	0	0	0	0	0	0	0	0	91.667	8.3333		0	0	0	0	0		
Total %	0	0	0	0	0	0	0	0	0	0	91.667	8.3333	100	0	0	0	0	0	0	
Exiting Leg Total	0						36						0						36	

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:00 AM	Ryder Street						Mirak Mill Park South Driveway						Ryder Street						Total
	from North						from East						from South						
	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	U-Turn	CW-WB	CW-EB	Total	
7:00 AM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1
7:15 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1
7:30 AM	0	0	0	0	0	0	0	0	0	21	1	22	0	0	0	0	0	0	22
7:45 AM	0	0	0	0	0	0	0	0	0	8	0	8	0	0	0	0	0	0	8
Total Volume	0	0	0	0	0	0	0	0	0	30	2	32	0	0	0	0	0	0	32
% Approach Total	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	93.8	6.3		0.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.357	0.500	0.364	0.000	0.000	0.000	0.000	0.000	0.000	0.364
Entering Leg	0	0	0	0	0	0	0	0	0	30	2	32	0	0	0	0	0	0	32
Exiting Leg	0						32						0						32
Total	0						64						0						64



PDI File #: **207450 HH**  
 Location: **N: Ryder Street S: Ryder Street**  
 Location: **E: Mirak Mill Park South Driveway**  
 City, State: **Arlington, MA**  
 Client: **Nitsch Eng/B.Zimolka**  
 Site Code: **TBD**  
 Count Date: **Tuesday, February 4, 2020**  
 Start Time: **4:00 PM**  
 End Time: **6:00 PM**  
 Class:



### Cars and Heavy Vehicles (Combined)

	Ryder Street				Mirak Mill Park South Driveway				Ryder Street				Total
	from North				from East				from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
4:00 PM	2	0	0	2	2	3	0	5	1	1	0	2	9
4:15 PM	2	0	0	2	1	1	0	2	2	1	0	3	7
4:30 PM	1	1	0	2	1	3	0	4	0	3	0	3	9
4:45 PM	1	0	0	1	0	6	0	6	0	3	0	3	10
Total	6	1	0	7	4	13	0	17	3	8	0	11	35
5:00 PM	1	0	0	1	0	4	0	4	1	0	0	1	6
5:15 PM	0	0	0	0	0	2	0	2	1	1	0	2	4
5:30 PM	1	0	0	1	1	3	0	4	2	3	1	6	11
5:45 PM	3	0	0	3	0	0	0	0	0	1	1	2	5
Total	5	0	0	5	1	9	0	10	4	5	2	11	26
Grand Total	11	1	0	12	5	22	0	27	7	13	2	22	61
Approach %	91.7	8.3	0.0		18.5	81.5	0.0		31.8	59.1	9.1		
Total %	18.0	1.6	0.0	19.7	8.2	36.1	0.0	44.3	11.5	21.3	3.3	36.1	
Exiting Leg Total	18				8				35				61
Cars	11	1	0	12	5	22	0	27	5	11	2	18	57
% Cars	100.0	100.0	0.0	100.0	100.0	100.0	0.0	100.0	71.4	84.6	100.0	81.8	93.4
Exiting Leg Total	16				6				35				57
Heavy Vehicles	0	0	0	0	0	0	0	0	2	2	0	4	4
% Heavy Vehicles	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	28.6	15.4	0.0	18.2	6.6
Exiting Leg Total	2				2				0				4

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Ryder Street					Mirak Mill Park South Driveway					Ryder Street					Total
	from North					from East					from South					
	Thru	Left	U-Turn	Total		Right	Left	U-Turn	Total		Right	Thru	U-Turn	Total		
4:00 PM	2	0	0	0	2	2	3	0	0	5	1	1	0	0	2	9
4:15 PM	2	0	0	0	2	1	1	0	0	2	2	1	0	0	3	7
4:30 PM	1	1	0	0	2	1	3	0	0	4	0	3	0	0	3	9
4:45 PM	1	0	0	0	1	0	6	0	0	6	0	3	0	0	3	10
Total Volume	6	1	0	0	7	4	13	0	0	17	3	8	0	0	11	35
% Approach Total	85.7	14.3	0.0	0.0		23.5	76.5	0.0	0.0		27.3	72.7	0.0	0.0		
PHF	0.750	0.250	0.000	0.875		0.500	0.542	0.000	0.708		0.375	0.667	0.000	0.917		0.875
Cars	6	1	0	0	7	4	13	0	0	17	2	6	0	0	8	32
Cars %	100.0	100.0	0.0	0.0	100.0	100.0	100.0	0.0	0.0	100.0	66.7	75.0	0.0	0.0	72.7	91.4
Heavy Vehicles	0	0	0	0	0	0	0	0	0	0	1	2	0	0	3	3
Heavy Vehicles %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	33.3	25.0	0.0	0.0	27.3	8.6
Cars Enter Leg	6	1	0	0	7	4	13	0	0	17	2	6	0	0	8	32
Heavy Enter Leg	0	0	0	0	0	0	0	0	0	0	1	2	0	0	3	3
Total Entering Leg	6	1	0	0	7	4	13	0	0	17	3	8	0	0	11	35
Cars Exiting Leg					10					3					19	32
Heavy Exiting Leg					2					1					0	3
Total Exiting Leg					12					4					19	35



PDI File #: **207450 HH**  
 Location: **N: Ryder Street S: Ryder Street**  
 Location: **E: Mirak Mill Park South Driveway**  
 City, State: **Arlington, MA**  
 Client: **Nitsch Eng/B.Zimolka**  
 Site Code: **TBD**  
 Count Date: **Tuesday, February 4, 2020**  
 Start Time: **4:00 PM**  
 End Time: **6:00 PM**  
 Class:



### Cars

	Ryder Street					Mirak Mill Park South Driveway					Ryder Street					Total
	from North					from East					from South					
	Thru	Left	U-Turn	Total		Right	Left	U-Turn	Total		Right	Thru	U-Turn	Total		
4:00 PM	2	0	0	2		2	3	0	5		0	1	0	1		8
4:15 PM	2	0	0	2		1	1	0	2		2	0	0	2		6
4:30 PM	1	1	0	2		1	3	0	4		0	3	0	3		9
4:45 PM	1	0	0	1		0	6	0	6		0	2	0	2		9
Total	6	1	0	7		4	13	0	17		2	6	0	8		32
5:00 PM	1	0	0	1		0	4	0	4		1	0	0	1		6
5:15 PM	0	0	0	0		0	2	0	2		1	1	0	2		4
5:30 PM	1	0	0	1		1	3	0	4		1	3	1	5		10
5:45 PM	3	0	0	3		0	0	0	0		0	1	1	2		5
Total	5	0	0	5		1	9	0	10		3	5	2	10		25
Grand Total	11	1	0	12		5	22	0	27		5	11	2	18		57
Approach %	91.7	8.3	0.0			18.5	81.5	0.0			27.8	61.1	11.1			
Total %	19.3	1.8	0.0	21.1		8.8	38.6	0.0	47.4		8.8	19.3	3.5	31.6		
Exiting Leg Total	16					6					35					57

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Ryder Street				Mirak Mill Park South Driveway				Ryder Street				Total
	from North				from East				from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
4:00 PM	2	0	0	2	2	3	0	5	0	1	0	1	8
4:15 PM	2	0	0	2	1	1	0	2	2	0	0	2	6
4:30 PM	1	1	0	2	1	3	0	4	0	3	0	3	9
4:45 PM	1	0	0	1	0	6	0	6	0	2	0	2	9
Total Volume	6	1	0	7	4	13	0	17	2	6	0	8	32
% Approach Total	85.7	14.3	0.0		23.5	76.5	0.0		25.0	75.0	0.0		
PHF	0.750	0.250	0.000	0.875	0.500	0.542	0.000	0.708	0.250	0.500	0.000	0.667	0.889
Entering Leg	6	1	0	7	4	13	0	17	2	6	0	8	32
Exiting Leg				10				3				19	32
Total				17				20				27	64



PDI File #: **207450 HH**  
 Location: **N: Ryder Street S: Ryder Street**  
 Location: **E: Mirak Mill Park South Driveway**  
 City, State: **Arlington, MA**  
 Client: **Nitsch Eng/B.Zimolka**  
 Site Code: **TBD**  
 Count Date: **Tuesday, February 4, 2020**  
 Start Time: **4:00 PM**  
 End Time: **6:00 PM**



Class: **Heavy Vehicles-Combined (Buses, Single-Unit Trucks, Articulated Trucks)**

	Ryder Street				Mirak Mill Park South Driveway				Ryder Street				Total
	from North				from East				from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
4:00 PM	0	0	0	0	0	0	0	0	1	0	0	1	1
4:15 PM	0	0	0	0	0	0	0	0	0	1	0	1	1
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	1	0	1	1
Total	0	0	0	0	0	0	0	0	1	2	0	3	3
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	1	0	0	1	1
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	1	0	0	1	1
Grand Total	0	0	0	0	0	0	0	0	2	2	0	4	4
Approach %	0.0	0.0	0.0		0.0	0.0	0.0		50.0	50.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	50.0	50.0	0.0	100.0	
Exiting Leg Total	2				2				0				4
Buses	0	0	0	0	0	0	0	0	0	0	0	0	0
% Buses	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Exiting Leg Total	0				0				0				0
Single-Unit Trucks	0	0	0	0	0	0	0	0	2	2	0	4	4
% Single-Unit	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	100.0	0.0	100.0	100.0
Exiting Leg Total	2				2				0				4
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0
% Articulated	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Exiting Leg Total	0				0				0				0

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Ryder Street				Mirak Mill Park South Driveway				Ryder Street				Total
	from North				from East				from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
4:00 PM	0	0	0	0	0	0	0	0	1	0	0	1	1
4:15 PM	0	0	0	0	0	0	0	0	0	1	0	1	1
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	1	0	1	1
Total Volume	0	0	0	0	0	0	0	0	1	2	0	3	3
% Approach Total	0.0	0.0	0.0		0.0	0.0	0.0		33.3	66.7	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.500	0.000	0.750	0.750
Buses	0	0	0	0	0	0	0	0	0	0	0	0	0
Buses %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Single-Unit Trucks	0	0	0	0	0	0	0	0	1	2	0	3	3
Single-Unit %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	100.0	0.0	100.0	100.0
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0
Articulated %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Buses	0	0	0	0	0	0	0	0	0	0	0	0	0
Single-Unit Trucks	0	0	0	0	0	0	0	0	1	2	0	3	3
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Entering Leg	0	0	0	0	0	0	0	0	1	2	0	3	3
Buses				0				0				0	0
Single-Unit Trucks				2				1				0	3
Articulated Trucks				0				0				0	0
Total Exiting Leg				2				1				0	3



PDI File #: **207450 HH**  
 Location: **N: Ryder Street S: Ryder Street**  
 Location: **E: Mirak Mill Park South Driveway**  
 City, State: **Arlington, MA**  
 Client: **Nitsch Eng/B.Zimolka**  
 Site Code: **TBD**  
 Count Date: **Tuesday, February 4, 2020**  
 Start Time: **4:00 PM**  
 End Time: **6:00 PM**



Class:

**Buses**

	Ryder Street				Mirak Mill Park South Driveway				Ryder Street				Total
	from North				from East				from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total	0				0				0				0

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Ryder Street				Mirak Mill Park South Driveway				Ryder Street				Total
	from North				from East				from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0
% Approach Total	0.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0
Exiting Leg				0				0				0	0
Total				0				0				0	0



PDI File #: **207450 HH**  
 Location: **N: Ryder Street S: Ryder Street**  
 Location: **E: Mirak Mill Park South Driveway**  
 City, State: **Arlington, MA**  
 Client: **Nitsch Eng/B.Zimolka**  
 Site Code: **TBD**  
 Count Date: **Tuesday, February 4, 2020**  
 Start Time: **4:00 PM**  
 End Time: **6:00 PM**  
 Class:



### Single-Unit Trucks

	Ryder Street					Mirak Mill Park South Driveway					Ryder Street					Total
	from North					from East					from South					
	Thru	Left	U-Turn	Total		Right	Left	U-Turn	Total		Right	Thru	U-Turn	Total		
4:00 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
Total	0	0	0	0	0	0	0	0	0	0	1	2	0	0	3	3
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
Grand Total	0	0	0	0	0	0	0	0	0	0	2	2	0	0	4	4
Approach %	0.0	0.0	0.0			0.0	0.0	0.0			50.0	50.0	0.0			
Total %	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		50.0	50.0	0.0	100.0		
Exiting Leg Total	2					2					0					4

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Ryder Street				Mirak Mill Park South Driveway				Ryder Street				Total
	from North				from East				from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
4:00 PM	0	0	0	0	0	0	0	0	1	0	0	1	1
4:15 PM	0	0	0	0	0	0	0	0	0	1	0	1	1
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	1	0	1	1
Total Volume	0	0	0	0	0	0	0	0	1	2	0	3	3
% Approach Total	0.0	0.0	0.0		0.0	0.0	0.0		33.3	66.7	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.500	0.000	0.750	0.750
Entering Leg	0	0	0	0	0	0	0	0	1	2	0	3	3
Exiting Leg				2				1				0	3
Total				2				1				3	



PDI File #: **207450 HH**  
 Location: **N: Ryder Street S: Ryder Street**  
 Location: **E: Mirak Mill Park South Driveway**  
 City, State: **Arlington, MA**  
 Client: **Nitsch Eng/B.Zimolka**  
 Site Code: **TBD**  
 Count Date: **Tuesday, February 4, 2020**  
 Start Time: **4:00 PM**  
 End Time: **6:00 PM**  
 Class:



### Articulated Trucks

	Ryder Street					Mirak Mill Park South Driveway					Ryder Street					Total
	from North					from East					from South					
	Thru	Left	U-Turn	Total		Right	Left	U-Turn	Total		Right	Thru	U-Turn	Total		
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0.0	0.0	0.0			0.0	0.0	0.0			0.0	0.0	0.0			
Total %	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		
Exiting Leg Total	0					0					0					0

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Ryder Street				Mirak Mill Park South Driveway				Ryder Street				Total
	from North				from East				from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0
% Approach Total	0.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0
Exiting Leg				0				0				0	0
Total				0				0				0	



PDI File #: **207450 HH**  
 Location: **N: Ryder Street S: Ryder Street**  
 Location: **E: Mirak Mill Park South Driveway**  
 City, State: **Arlington, MA**  
 Client: **Nitsch Eng/B.Zimolka**  
 Site Code: **TBD**



Count Date: **Tuesday, February 4, 2020**  
 Start Time: **4:00 PM**  
 End Time: **6:00 PM**

Class: **Bicycles (on Roadway and Crosswalks)**

	Ryder Street							Mirak Mill Park South Driveway							Ryder Street							Total
	from North							from East							from South							
	Thru	Left	U-Turn	CW-EB	CW-WB	Total		Right	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	U-Turn	CW-WB	CW-EB	Total			
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1		
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1		
5:00 PM	1	0	0	0	0	1	1	0	0	0	0	0	0	0	1	0	0	0	1	2		
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
5:45 PM	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	1		
Total	1	0	0	0	0	1	1	1	0	0	0	0	1	0	1	0	0	0	1	3		
Grand Total	1	0	0	0	0	1	1	1	0	0	0	0	1	0	2	0	0	0	2	4		
Approach %	100.0	0.0	0.0	0.0	0.0			100.0	0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0	0.0				
Total %	25.0	0.0	0.0	0.0	0.0	25.0		25.0	0.0	0.0	0.0	0.0	25.0	0.0	50.0	0.0	0.0	0.0	50.0			
Exiting Leg Total	3							0							1							4

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

5:00 PM	Ryder Street						Mirak Mill Park South Driveway						Ryder Street						Total	
	from North						from East						from South							
	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	U-Turn	CW-WB	CW-EB	Total		
5:00 PM	1	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	1	2
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	1
Total Volume	1	0	0	0	0	1	1	0	0	0	0	1	0	1	0	0	0	1	3	
% Approach Total	100.0	0.0	0.0	0.0	0.0		100.0	0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0	0.0			
PHF	0.250	0.000	0.000	0.000	0.000	0.250	0.250	0.000	0.000	0.000	0.000	0.250	0.000	0.250	0.000	0.000	0.000	0.250	0.375	
Entering Leg	1	0	0	0	0	1	1	0	0	0	0	1	0	1	0	0	0	1	3	
Exiting Leg	2						0						1						3	
Total	3						1						2						6	



PDI File #: 207450 HH  
 Location: N: Ryder Street S: Ryder Street  
 Location: E: Mirak Mill Park South Driveway  
 City, State: Arlington, MA  
 Client: Nitsch Eng/B.Zimolka  
 Site Code: TBD  
 Count Date: Tuesday, February 4, 2020  
 Start Time: 4:00 PM  
 End Time: 6:00 PM  
 Class:



### Pedestrians

	Ryder Street						Mirak Mill Park South Driveway						Ryder Street						Total	
	from North						from East						from South							
	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	U-Turn	CW-WB	CW-EB	Total		
4:00 PM	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1	1	2
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1
4:30 PM	0	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	0	0	0	2
4:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1
Total	0	0	0	0	0	0	0	0	0	0	3	2	5	0	0	0	0	1	1	6
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1
5:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	0	0	0	2
Grand Total	0	0	0	0	0	0	0	0	0	0	4	3	7	0	0	0	0	1	1	8
Approach %	0	0	0	0	0	0	0	0	0	0	57.143	42.857		0	0	0	0	100		
Total %	0	0	0	0	0	0	0	0	0	0	50	37.5	87.5	0	0	0	0	12.5	12.5	
Exiting Leg Total	0						7						1						8	

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Ryder Street						Mirak Mill Park South Driveway						Ryder Street						Total	
	from North						from East						from South							
	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	U-Turn	CW-WB	CW-EB	Total		
4:00 PM	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1	1	2
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1
4:30 PM	0	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	0	0	0	2
4:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1
Total Volume	0	0	0	0	0	0	0	0	0	0	3	2	5	0	0	0	0	1	1	6
% Approach Total	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	60.0	40.0		0.0	0.0	0.0	0.0	100.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.750	0.500	0.625	0.000	0.000	0.000	0.000	0.250	0.250	0.750
Entering Leg	0	0	0	0	0	0	0	0	0	0	3	2	5	0	0	0	0	1	1	6
Exiting Leg	0						5						1						6	
Total	0						10						2						12	





Appendix B: MassDOT’s 2019 Weekday Seasonal Adjustment Factors



Massachusetts Highway Department  
Statewide Traffic Data Collection  
2019 Weekday Seasonal Factors

Factor Group	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Axle Factor
<b>R1</b>	1.22	1.14	1.12	1.06	1.00	0.96	0.87	0.85	0.96	0.99	1.04	1.12	0.85
<b>R2</b>	0.95	0.96	0.98	0.97	0.97	0.93	0.97	0.94	0.96	0.90	0.92	0.93	0.96
<b>R3</b>	1.15	1.06	1.07	1.00	0.89	0.88	0.89	0.89	0.95	0.92	1.02	1.01	0.97
<b>R4-R7</b>	1.09	1.09	1.11	1.02	0.96	0.92	0.89	0.89	0.99	0.98	1.09	1.13	0.98
<b>U1-Boston</b>	1.03	1.01	0.98	0.94	0.94	0.92	0.95	0.93	0.94	0.94	0.97	1.04	0.96
<b>U1-Essex</b>	1.09	1.06	1.03	0.99	0.94	0.90	0.88	0.86	0.93	0.94	0.99	1.06	0.93
<b>U1-Southeast</b>	1.06	1.05	1.01	0.97	0.95	0.93	0.93	0.90	0.94	0.94	0.98	1.04	0.98
<b>U1-West</b>	1.19	1.14	1.09	0.95	0.92	0.89	0.89	0.86	0.91	0.95	0.97	1.07	0.84
<b>U1-Worcester</b>	1.02	1.04	0.97	0.94	0.93	0.91	0.95	0.91	0.93	0.92	0.95	1.10	0.88
<b>U2</b>	1.01	1.00	0.94	0.93	0.91	0.89	0.93	0.90	0.90	0.91	0.94	1.02	0.99
<b>U3</b>	1.06	1.03	0.98	0.94	0.93	0.91	0.95	0.91	0.92	0.93	0.97	1.00	0.98
<b>U4-U7</b>	1.01	1.00	0.95	0.92	0.88	0.86	0.92	0.91	0.92	0.94	0.99	1.04	0.99
<b>Rec - East</b>	1.04	1.16	1.12	0.98	0.92	0.88	0.77	0.81	0.94	1.02	1.08	1.12	0.99
<b>Rec - West</b>	1.30	1.23	1.32	1.18	0.95	0.82	0.70	0.69	0.97	0.96	1.16	1.15	0.98

Round off:

0-999 = 10

>1000 = 100

U = Urban

R = Rural

1 - Interstate

2 - Freeway and Expressway

3 - Other Principal Arterial

4 - Minor Arterial

5 - Major Collector

6 - Minor Collector

7 - Local Road and Street

**Recreational - East Group** - Cape Cod (all towns) including the town of Plymouth south of Route 3A (stations 7014,7079,7080,7090,7091,7092,7093,7094,7095,7096,7097,7108 and 7178), Martha's Vineyard and Nantucket.

**Recreational - West Group** - Continuous Stations 2 and 189 including stations 1066,1067,1083,1084,1085,1086,1087,1088,1089,1090,1091,1092,1093,1094,1095,1096,1097,1098,1099,1100,1101,1102,1103,1104,1105,1106,1107,1108,1113,1114,1116,2196,2197 and 2198.





Appendix C: Crash Rate Worksheets



## INTERSECTION CRASH RATE WORKSHEET

CITY/TOWN : Arlington COUNT DATE : 2/4/2020

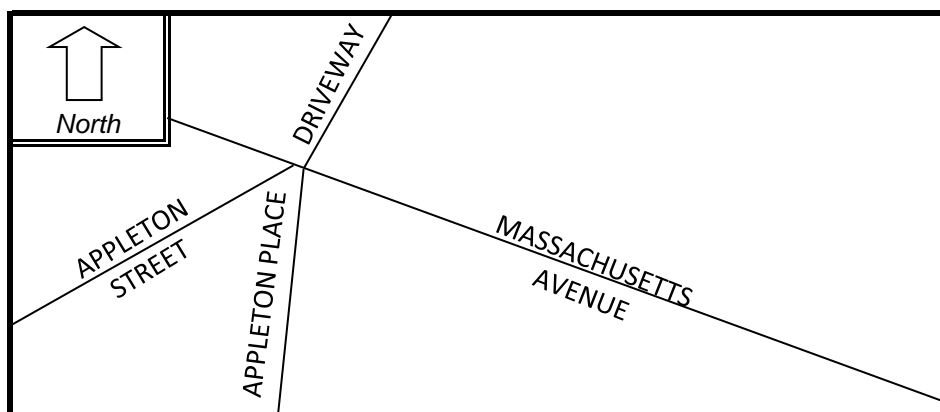
DISTRICT : 4 UNSIGNALIZED : ☒ SIGNALIZED : ☐

### ~ INTERSECTION DATA ~

MAJOR STREET : Massachusetts Avenue

MINOR STREET(S) : Appleton Street, Appleton Place, Commercial Driveway

INTERSECTION  
DIAGRAM



### PEAK HOUR VOLUMES

APPROACH :	1	2	3	4	5	Total Peak Hourly Approach Volume
DIRECTION :	EB	WB	NB	NEB	SB	
PEAK HOURLY VOLUMES (AM/PM) :	376	625	64	159	0	1,224

" K " FACTOR :  INTERSECTION ADT ( V ) = TOTAL DAILY APPROACH VOLUME :

TOTAL # OF CRASHES :  # OF YEARS :  AVERAGE # OF CRASHES PER YEAR ( A ) :

CRASH RATE CALCULATION :

RATE =

$$\frac{(A * 1,000,000)}{(V * 365)}$$

Comments : AM Peak used

Project Title & Date: 1167 Massachusetts Ave, June 2020



## INTERSECTION CRASH RATE WORKSHEET

CITY/TOWN : Arlington COUNT DATE : 2/4/2020

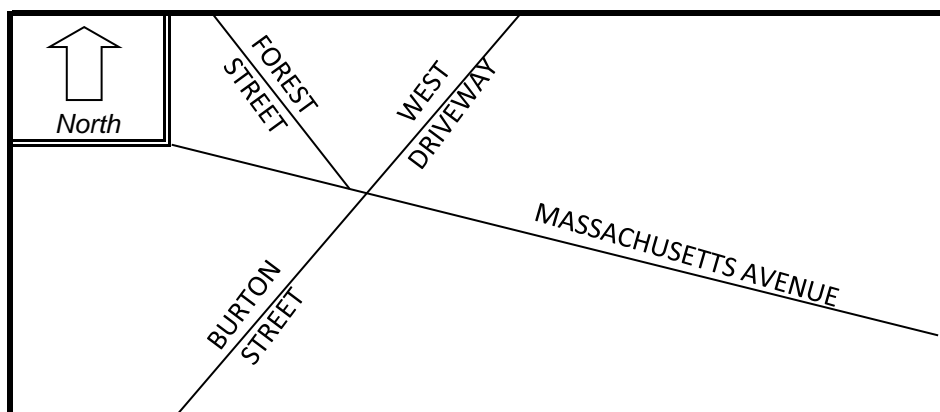
DISTRICT : 4 UNSIGNALIZED : ☒ SIGNALIZED : ☐

### ~ INTERSECTION DATA ~

MAJOR STREET : Massachusetts Avenue

MINOR STREET(S) : Forest Street, Burton Street, and Mirak Mill West Driveway

**INTERSECTION  
DIAGRAM**



### PEAK HOUR VOLUMES

APPROACH :	1	2	3	4	5	Total Peak Hourly Approach Volume
DIRECTION :	EB	WB	NB	SEB	SB	
PEAK HOURLY VOLUMES (AM/PM) :	492	541	28	281	2	1,344

" K " FACTOR :

**0.08**

INTERSECTION ADT ( V ) = TOTAL DAILY APPROACH VOLUME :

**16,800**

TOTAL # OF CRASHES :

**10**

# OF YEARS :

**3**

AVERAGE # OF CRASHES PER YEAR ( A ) :

**3.33**

**CRASH RATE CALCULATION :**

**0.54**

RATE =

$$\frac{(A * 1,000,000)}{(V * 365)}$$

Comments : AM Peak used

Project Title & Date: 1167 Massachusetts Ave, June 2020



## INTERSECTION CRASH RATE WORKSHEET

CITY/TOWN : Arlington COUNT DATE : 2/4/2020

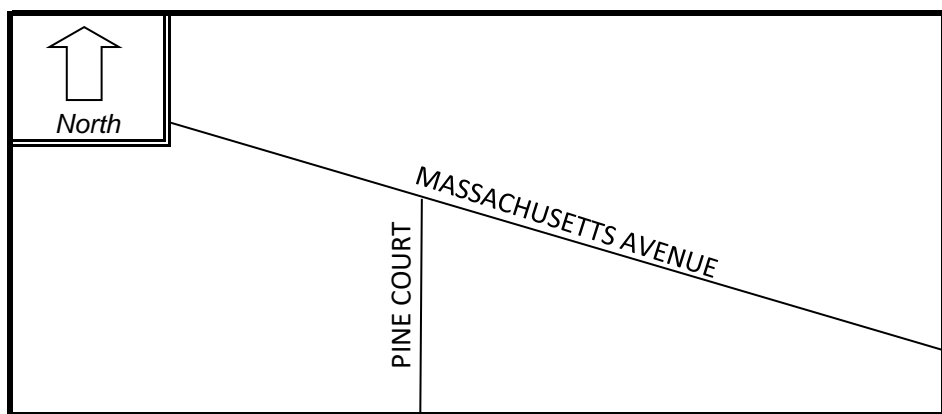
DISTRICT : 4 UNSIGNALIZED : ☒ SIGNALIZED : ☐

### ~ INTERSECTION DATA ~

MAJOR STREET : Massachusetts Avenue

MINOR STREET(S) : Pine Court

INTERSECTION  
DIAGRAM



PEAK HOUR VOLUMES

APPROACH :	1	2	3	4	5	Total Peak Hourly Approach Volume
DIRECTION :	EB	WB	NB	SB		
PEAK HOURLY VOLUMES (AM/PM) :	591	445	2			1,038

" K " FACTOR :

**0.08**

INTERSECTION ADT ( V ) = TOTAL DAILY APPROACH VOLUME :

**12,975**

TOTAL # OF CRASHES :

**2**

# OF YEARS :

**3**

AVERAGE # OF CRASHES PER YEAR ( A ) :

**0.67**

CRASH RATE CALCULATION :

**0.14**

RATE =

$$\frac{(A * 1,000,000)}{(V * 365)}$$

Comments : PM Peak used

Project Title & Date: 1167 Massachusetts Ave, June 2020



## INTERSECTION CRASH RATE WORKSHEET

CITY/TOWN : Arlington COUNT DATE : 2/4/2020

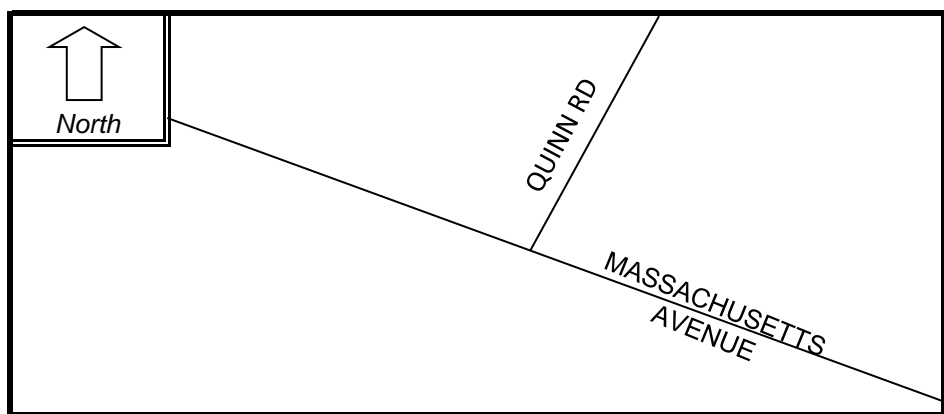
DISTRICT : 4 UNSIGNALIZED : ☒ SIGNALIZED : ☐

### ~ INTERSECTION DATA ~

MAJOR STREET : Massachusetts Avenue

MINOR STREET(S) : Quinn Road

INTERSECTION  
DIAGRAM



### PEAK HOUR VOLUMES

APPROACH :	1	2	3	4	5	Total Peak Hourly Approach Volume
DIRECTION :	EB	WB	NB	SB		
PEAK HOURLY VOLUMES (AM/PM) :	587	431		32		1,050

" K " FACTOR :  INTERSECTION ADT ( V ) = TOTAL DAILY APPROACH VOLUME :

TOTAL # OF CRASHES :  # OF YEARS :  AVERAGE # OF CRASHES PER YEAR ( A ) :

CRASH RATE CALCULATION :

RATE =

$$\frac{(A * 1,000,000)}{(V * 365)}$$

Comments : PM Peak used

Project Title & Date: 1167 Massachusetts Ave, June 2020



## INTERSECTION CRASH RATE WORKSHEET

CITY/TOWN : Arlington COUNT DATE : 2/4/2020

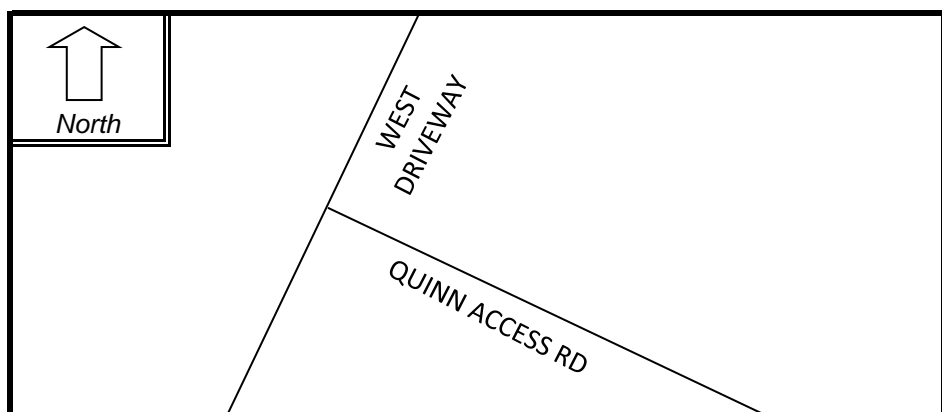
DISTRICT : 4 UNSIGNALIZED : ☒ SIGNALIZED : ☐

### ~ INTERSECTION DATA ~

MAJOR STREET : Mirak Mill Innovation Park West Driveway

MINOR STREET(S) : Quinn Access Road

**INTERSECTION  
DIAGRAM**



### PEAK HOUR VOLUMES

APPROACH :	1	2	3	4	5	Total Peak Hourly Approach Volume
DIRECTION :		WB	NB	SB		
PEAK HOURLY VOLUMES (AM/PM) :		11	8	20		39

" K " FACTOR :  INTERSECTION ADT ( V ) = TOTAL DAILY APPROACH VOLUME :

TOTAL # OF CRASHES :  # OF YEARS :  AVERAGE # OF CRASHES PER YEAR ( A ) :

**CRASH RATE CALCULATION :**

**0.00**

RATE =

$$\frac{(A * 1,000,000)}{(V * 365)}$$

Comments : PM Peak used

Project Title & Date: 1167 Massachusetts Ave, June 2020



## INTERSECTION CRASH RATE WORKSHEET

CITY/TOWN : Arlington COUNT DATE : 2/4/2020

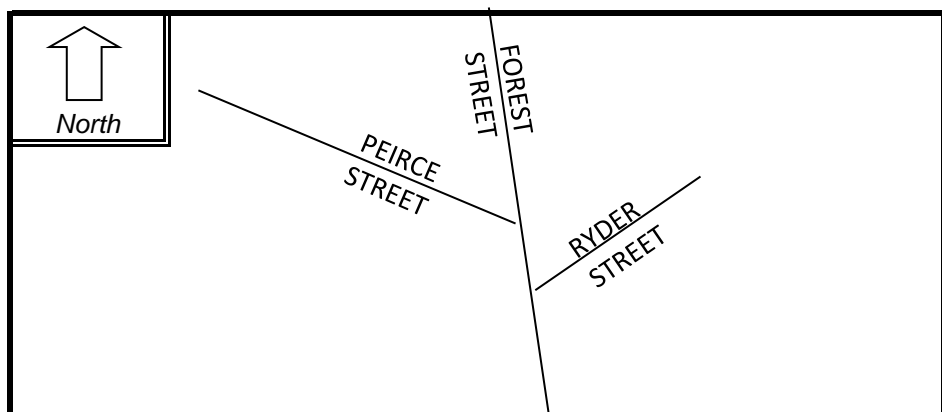
DISTRICT : 4 UNSIGNALIZED : ☒ SIGNALIZED : ☐

### ~ INTERSECTION DATA ~

MAJOR STREET : Forest Street

MINOR STREET(S) : Ryder Street and Peirce Street

INTERSECTION  
DIAGRAM



### PEAK HOUR VOLUMES

APPROACH :	1	2	3	4	5	Total Peak Hourly Approach Volume
DIRECTION :	EB	WB	NB	SB		
PEAK HOURLY VOLUMES (AM/PM) :	12	18	173	349		552

" K " FACTOR :  INTERSECTION ADT ( V ) = TOTAL DAILY APPROACH VOLUME :

TOTAL # OF CRASHES :  # OF YEARS :  AVERAGE # OF CRASHES PER YEAR ( A ) :

CRASH RATE CALCULATION :

RATE =

$$\frac{(A * 1,000,000)}{(V * 365)}$$

Comments : AM Peak used

Project Title & Date: 1167 Massachusetts Ave, June 2020



## INTERSECTION CRASH RATE WORKSHEET

CITY/TOWN : Arlington COUNT DATE : 2/4/2020

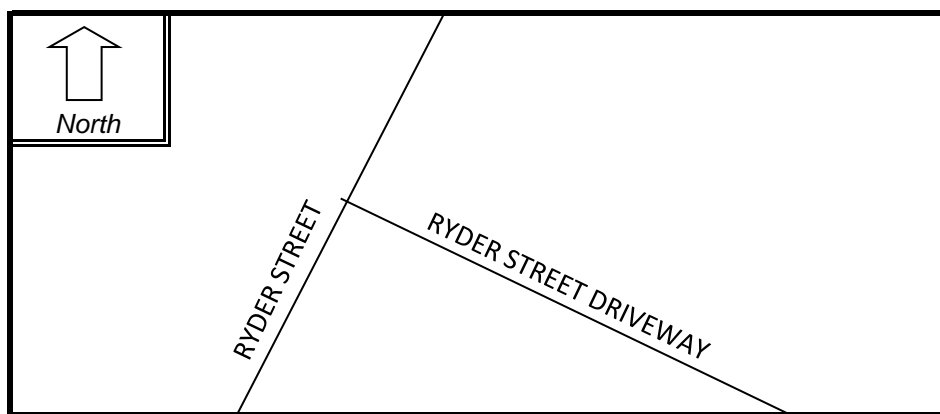
DISTRICT : 4 UNSIGNALIZED : ☒ SIGNALIZED : ☐

### ~ INTERSECTION DATA ~

MAJOR STREET : Ryder Street

MINOR STREET(S) : Ryder Street Driveway

INTERSECTION  
DIAGRAM



### PEAK HOUR VOLUMES

APPROACH :	1	2	3	4	5	Total Peak Hourly Approach Volume
DIRECTION :	EB	WB	NB	SB		
PEAK HOURLY VOLUMES (AM/PM) :		9	17	14		40

" K " FACTOR :

**0.08**

INTERSECTION ADT ( V ) = TOTAL DAILY APPROACH VOLUME :

**500**

TOTAL # OF CRASHES :

**0**

# OF YEARS :

**3**

AVERAGE # OF CRASHES PER YEAR ( A ) :

**0.00**

CRASH RATE CALCULATION :

**0.00**

RATE =

$$\frac{( A * 1,000,000 )}{( V * 365 )}$$

Comments : AM Peak used

Project Title & Date: 1167 Massachusetts Ave, June 2020





Appendix D: Traffic Signal Warrant Analyses



## MUTCD Traffic Signal Warrant Summary Worksheet

The Worksheet(s) attached are provided as an attachment to the Engineering Investigation Study for:

Intersection: Massachusetts Avenue and Forest Street/Burton Street  
City: Arlington

**100%**  
**Volume Level**

Major Street: Massachusetts Avenue  
Critical Approach Speed: 30 mph  
Lanes: 1 lane

Minor Street: Forest St/ Burton St  
Critical Approach Speed: 25 mph  
Lanes: 1 lane

% Right Turns Included  
From North (SB) 0%  
From East (WB) 0%  
From South (NB) 0%  
From West (EB) 0%

In built-up area of isolated community of < 10,000 population? No  
Total number of approaches at intersection? 4 or more  
Manually set volume level? No

Analysis based on **EXISTING** volume data.

Date	Day of the Week	Time (HH:MM)			
		From	AM / PM	To	AM / PM
2/5/2020	Wednesday	6:00	AM / PM	10:00	PM

Warrant Evaluation Summary	Warrant Met:
<b>Warrant 1: Eight - Hour Vehicular Volume</b>	<b>Yes</b>
Condition A: Minimum Vehicular Volume	No
Condition B: Interruption of Continuous Traffic	Yes
Condition C: Combination: 80% of A and B	No
<b>Warrant 2: Four-Hour Volume</b>	<b>Yes</b>
<b>Warrant 3: Peak Hour Volume</b>	<b>Yes</b>
<b>Warrant 4: Pedestrian Volume</b>	<b>N/A</b>
Criterion A: Four-Hour	
Criterion B: Peak-Hour	
<b>Warrant 5: School Crossing</b>	<b>N/A</b>
<b>Warrant 6: Coordinated Signal System</b>	<b>N/A</b>
<b>Warrant 7: Crash Experience</b>	<b>N/A</b>
<b>Warrant 8: Roadway Network</b>	<b>N/A</b>
<b>Warrant 9: Intersection Near a Grade Crossing</b>	<b>N/A</b>

**Warrant Analysis Conducted By:**

Name:

Date:

*Nitsch Engineering*



## Warrant 1: Eight - Hour Vehicular Volume

100%

Warrant Evaluated? Yes

Condition A : Min. Veh. Volume		
Volume Level	100%	80%
Major Rd. Req	500	400
Minor Rd. Req	150	120
Number of Hours	2	4

Satisfied? No

Condition B: Interruption of Continuous Traffic		
Volume Level	100%	80%
Major Rd. Req	750	600
Minor Rd. Req	75	60
Number of Hours	11	12

Satisfied? Yes

Condition C: Combination of A & B at 80%		
---	--	--

Satisfied? No

Warrant Satisfied? Yes

Manually Set To:

6:00 AM		Enter Start Time (Military Time) (HH:MM)			Total
Time Period	From	To	Major Road: Both App. (VPH)	Minor Road: High App. (VPH)	
1	6:00	7:00	457	100	557
2	7:00	8:00	941	281	1222
3	8:00	9:00	981	230	1211
4	9:00	10:00	867	90	957
5	10:00	11:00	765	73	838
6	11:00	12:00	826	94	920
7	12:00	13:00	956	108	1064
8	13:00	14:00	881	80	961
9	14:00	15:00	927	104	1031
10	15:00	16:00	1021	100	1121
11	16:00	17:00	992	115	1107
12	17:00	18:00	1075	139	1214
13	18:00	19:00	919	125	1044
14	19:00	20:00	619	54	673
15	20:00	21:00	540	49	589
16	21:00	22:00	303	27	330

## Warrant 2: Four-Hour Volume

100%

Four hours with highest total volume meeting warrant criteria:

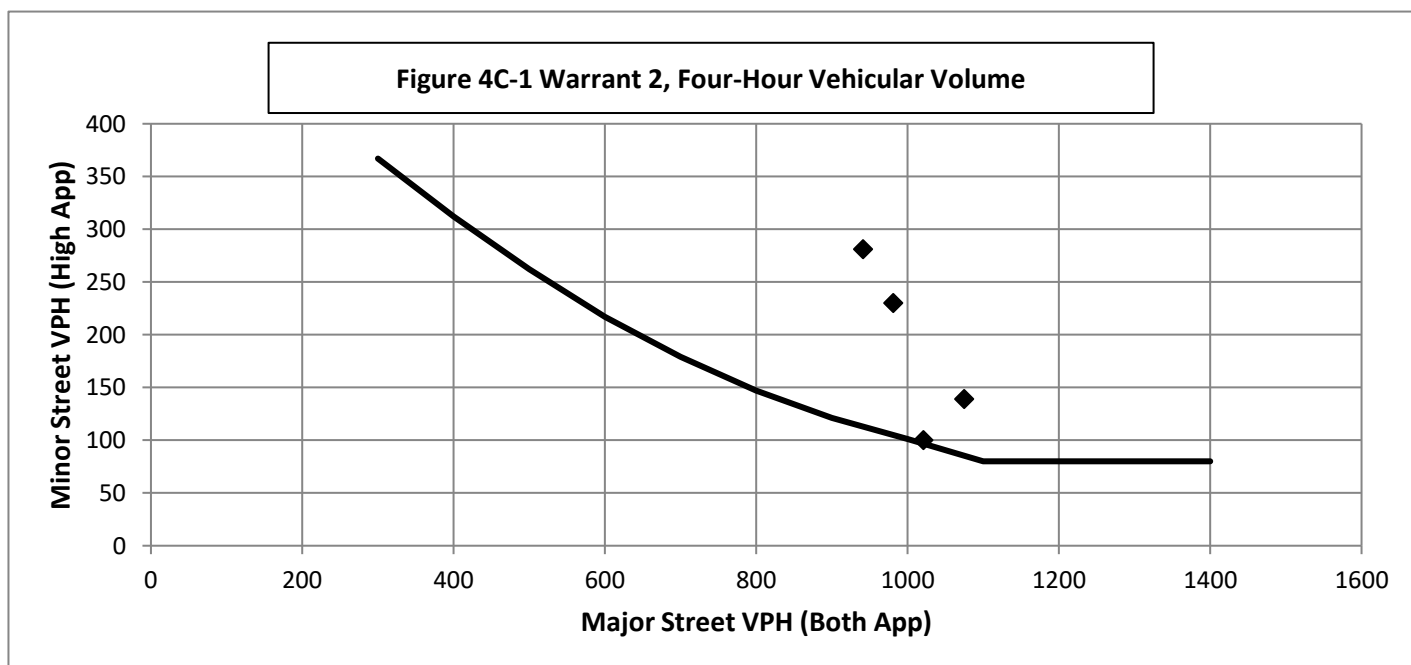
Hour Start	7:00	17:00	8:00	15:00
Major Road Vol.	941	1075	981	1021
Minor Road Vol.	281	139	230	100

Warrant Evaluated? Yes

Number of Hours 6

Warrant Satisfied? Yes

Manually Set To:





## Warrant 3: Peak Hour Volume

100%

Warrant Evaluated? Yes

Warrant Satisfied? Yes

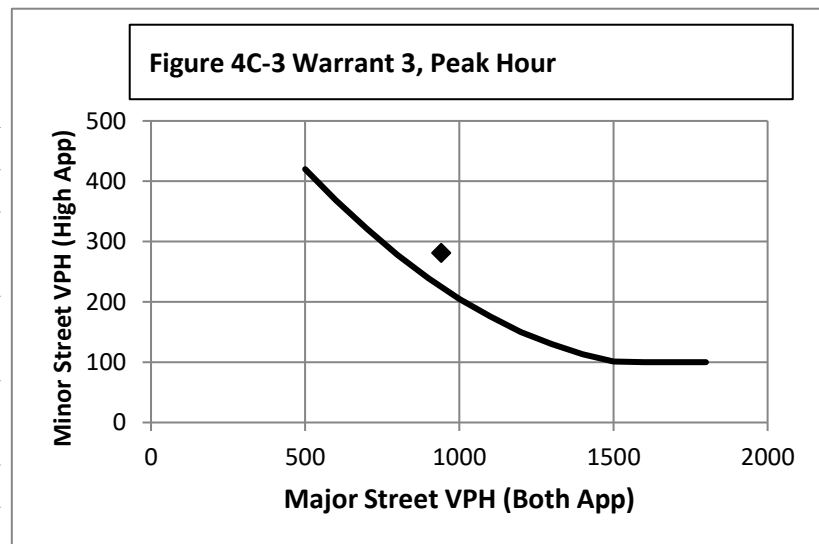
Manually Set To:

Condition justifying use of warrant:

Criteria		Met?
Delay on Minor Approach	4	Yes
Volume on Minor Approach	100	
Total Entering Volume (veh/h)	800	

Manually Set Peak Hour?

Peak Hour	Major Road Vol. (Both App.)	Minor Road Vol. (High App.)
7:00	941	281



## Warrant 4: Pedestrian Volume

100%

Warrant Evaluated? No

Warrant Satisfied? N/A

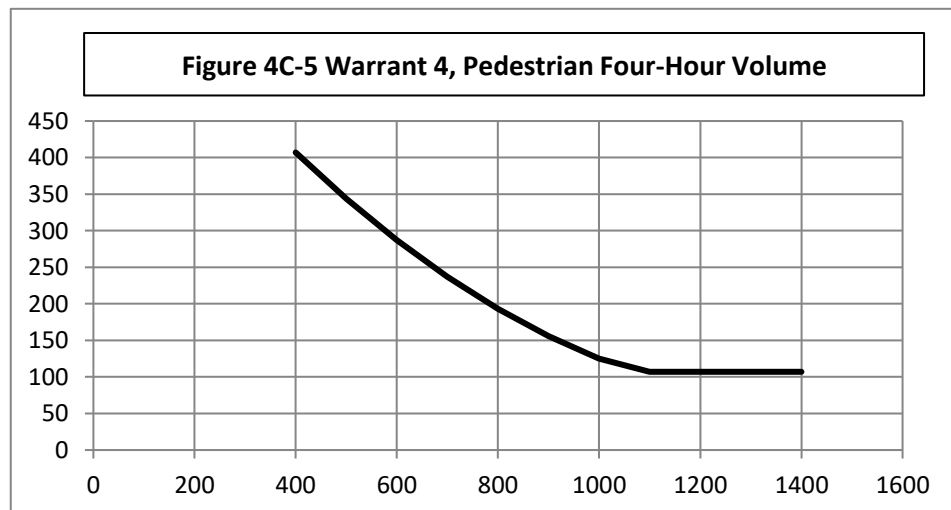
Manually Set To:

Criterion A: Four Hour

Hour (Start)	Pedestrian Volume	Major Road Vol.
		0
		0
		0
		0

Manually Set Major Rd Vol?  
15th % walk speed < 3.5 ft/s?

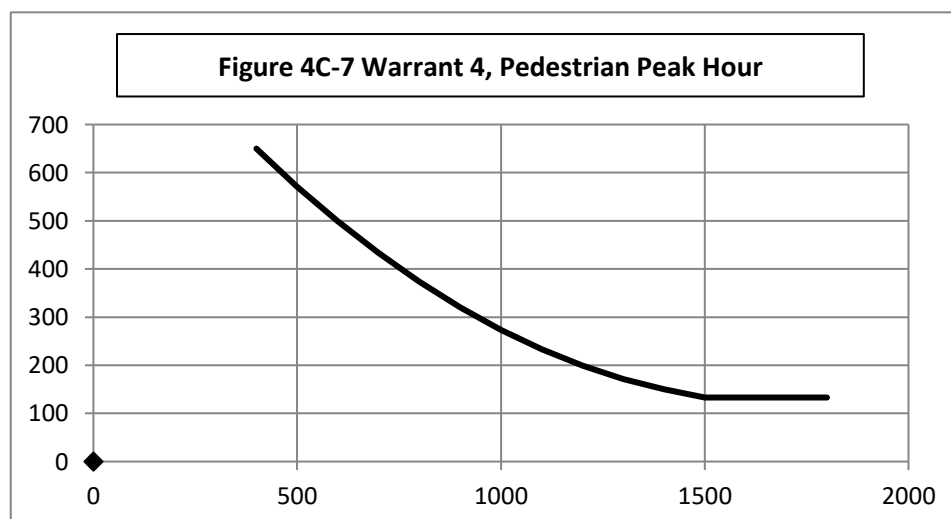
Criterion A Satisfied?



Criterion B: Peak Hour

Peak Hour	Pedestrian Vol.	Major Road Vol.
0:00	0	0

Criterion B Satisfied?





## MUTCD Traffic Signal Warrant Summary Worksheet

The Worksheet(s) attached are provided as an attachment to the Engineering Investigation Study for:

Intersection: Massachusetts Avenue and Forest Street/Burton Street  
City: Arlington

**100%**  
**Volume Level**

Major Street: Massachusetts Avenue  
Critical Approach Speed: 30 mph  
Lanes: 1 lane

Minor Street: Quinn Street  
Critical Approach Speed: 25 mph  
Lanes: 1 lane

% Right Turns Included  
From North (SB) 0%  
From East (WB) 0%  
From South (NB) 0%  
From West (EB) 0%

In built-up area of isolated community of < 10,000 population? No  
Total number of approaches at intersection? 4 or more  
Manually set volume level? No

Analysis based on **EXISTING** volume data.

Date	Day of the Week	Time (HH:MM)			
		From	AM / PM	To	AM / PM
2/5/2020	Wednesday	6:00	AM / PM	10:00	PM

Warrant Evaluation Summary	Warrant Met:
<b>Warrant 1: Eight - Hour Vehicular Volume</b>	<b>No</b>
Condition A: Minimum Vehicular Volume	No
Condition B: Interruption of Continuous Traffic	No
Condition C: Combination: 80% of A and B	No
<b>Warrant 2: Four-Hour Volume</b>	<b>No</b>
<b>Warrant 3: Peak Hour Volume</b>	<b>No</b>
<b>Warrant 4: Pedestrian Volume</b>	<b>N/A</b>
Criterion A: Four-Hour	
Criterion B: Peak-Hour	
<b>Warrant 5: School Crossing</b>	<b>N/A</b>
<b>Warrant 6: Coordinated Signal System</b>	<b>N/A</b>
<b>Warrant 7: Crash Experience</b>	<b>N/A</b>
<b>Warrant 8: Roadway Network</b>	<b>N/A</b>
<b>Warrant 9: Intersection Near a Grade Crossing</b>	<b>N/A</b>

**Warrant Analysis Conducted By:**

Name: Ashrafur Rahman

Date: 2/21/2020

**Nitsch Engineering**



## Warrant 1: Eight - Hour Vehicular Volume

100%

Warrant Evaluated? Yes

Condition A : Min. Veh. Volume		
Volume Level	100%	80%
Major Rd. Req	500	400
Minor Rd. Req	150	120
Number of Hours	0	0

Satisfied? No

Condition B: Interruption of Continuous Traffic		
Volume Level	100%	80%
Major Rd. Req	750	600
Minor Rd. Req	75	60
Number of Hours	0	0

Satisfied? No

Condition C: Combination of A & B at 80%		
---	--	--

Satisfied? No

Warrant Satisfied? No

Manually Set To:

6:00 AM		Enter Start Time (Military Time) (HH:MM)			Total
Time Period	From	To	Major Road: Both App. (VPH)	Minor Road: High App. (VPH)	
1	6:00	7:00	370	25	395
2	7:00	8:00	932	21	953
3	8:00	9:00	998	36	1034
4	9:00	10:00	828	35	863
5	10:00	11:00	742	13	755
6	11:00	12:00	804	29	833
7	12:00	13:00	900	28	928
8	13:00	14:00	489	28	517
9	14:00	15:00	669	24	693
10	15:00	16:00	979	20	999
11	16:00	17:00	910	25	935
12	17:00	18:00	934	31	965
13	18:00	19:00	810	12	822
14	19:00	20:00	632	6	638
15	20:00	21:00	531	8	539
16	21:00	22:00	348	2	350

## Warrant 2: Four-Hour Volume

100%

Four hours with highest total volume meeting warrant criteria:

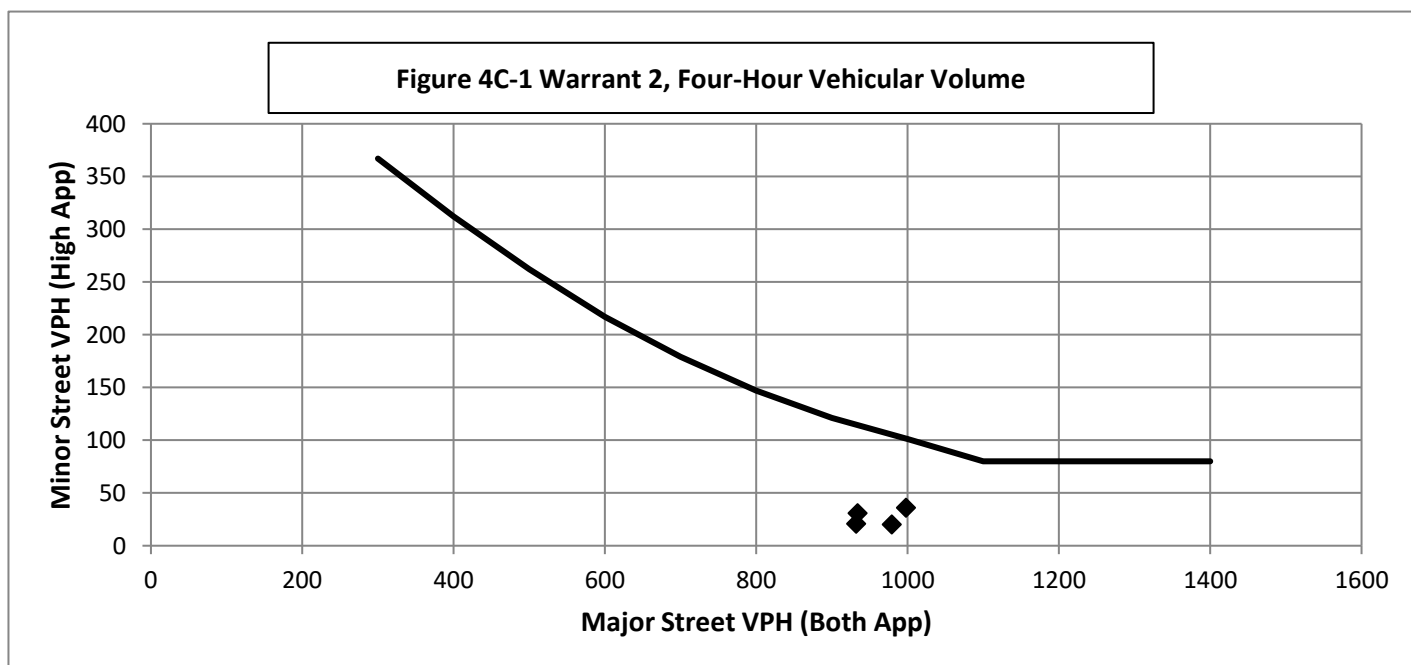
Hour Start	8:00	17:00	15:00	7:00
Major Road Vol.	998	934	979	932
Minor Road Vol.	36	31	20	21

Warrant Evaluated? Yes

Number of Hours 0

Warrant Satisfied? No

Manually Set To:





## Warrant 3: Peak Hour Volume

100%

Warrant Evaluated? Yes

Warrant Satisfied? No

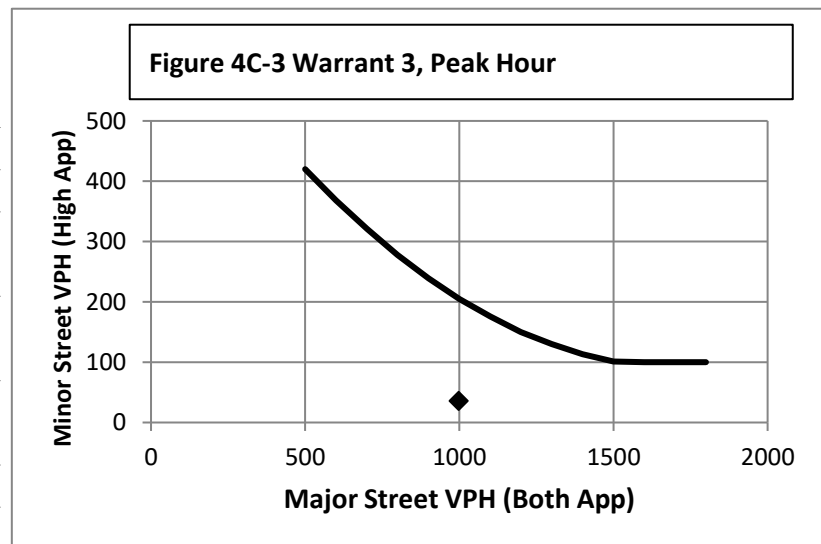
Manually Set To:

Condition justifying use of warrant:

Criteria		Met?
Delay on Minor Approach	4	No
Volume on Minor Approach	100	
Total Entering Volume (veh/h)	800	

Manually Set Peak Hour?

Peak Hour	Major Road Vol. (Both App.)	Minor Road Vol. (High App.)
8:00	998	36



## Warrant 4: Pedestrian Volume

100%

Warrant Evaluated? No

Warrant Satisfied? N/A

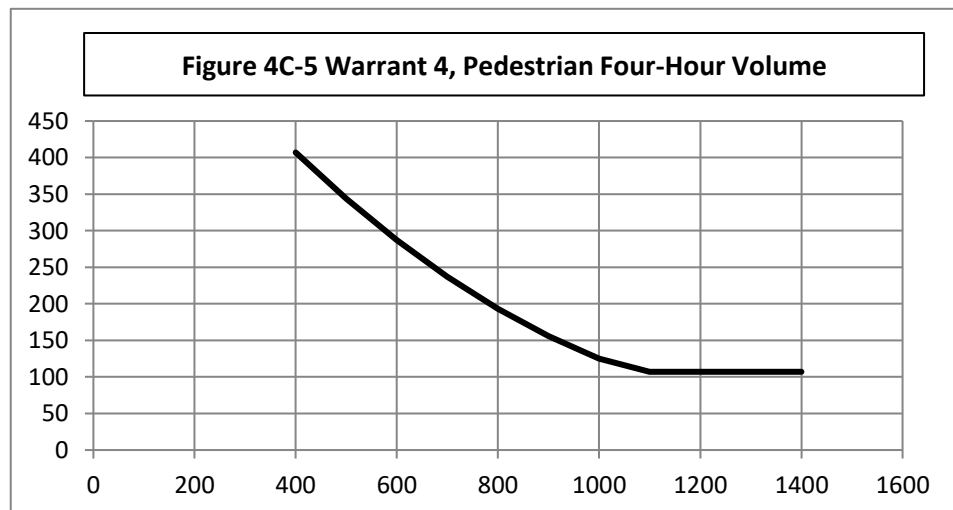
Manually Set To:

Criterion A: Four Hour

Hour (Start)	Pedestrian Volume	Major Road Vol.
		0
		0
		0
		0

Manually Set Major Rd Vol?  
15th % walk speed < 3.5 ft/s?

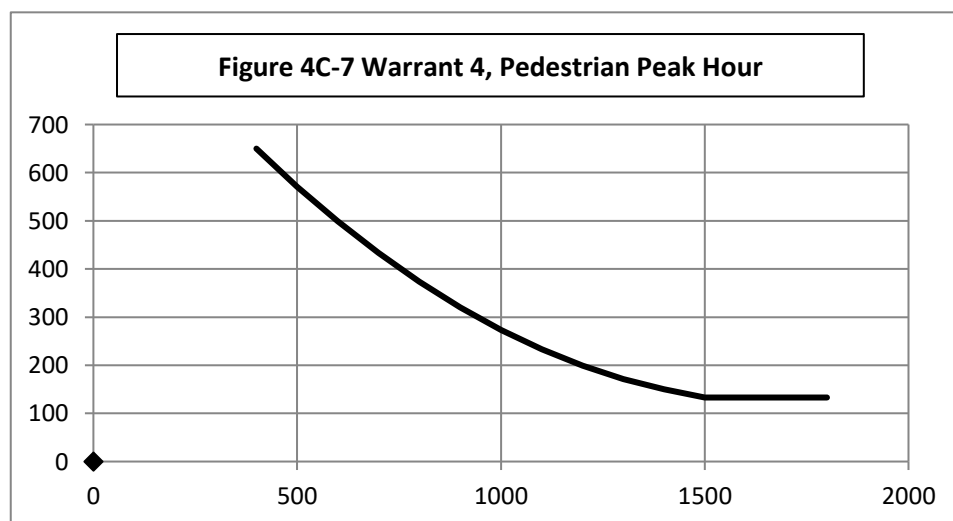
Criterion A Satisfied?



Criterion B: Peak Hour

Peak Hour	Pedestrian Vol.	Major Road Vol.
0:00	0	0

Criterion B Satisfied?























Appendix E: Capacity Analysis



Lanes, Volumes, Timings  
1: Appleton St & Appleton Pl & Massachusetts Ave

2020 Existing AM Peak Hour

















												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	341	46	284	359	0	17	0	163	1	0	0
Future Volume (vph)	0	341	46	284	359	0	17	0	163	1	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	14	14	14	14	14	14	12	12	12	12	12	12
Grade (%)		0%			0%			-4%			0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.984						0.878				
Flt Protected					0.978			0.995			0.950	
Satd. Flow (prot)	0	1580	0	0	1648	0	0	1678	0	0	1770	0
Flt Permitted					0.978			0.995			0.950	
Satd. Flow (perm)	0	1580	0	0	1648	0	0	1678	0	0	1770	0
Link Speed (mph)		15			15			25			25	
Link Distance (ft)		330			357			73			97	
Travel Time (s)		15.0			16.2			2.0			2.6	
Confl. Peds. (#/hr)	109		11	118		215	11		118	215		109
Confl. Bikes (#/hr)			2			1						
Peak Hour Factor	0.75	0.75	0.75	0.84	0.84	0.84	0.85	0.85	0.85	0.92	0.92	0.92
Heavy Vehicles (%)	0%	11%	2%	2%	7%	0%	0%	0%	1%	2%	2%	2%
Bus Blockages (#/hr)	8	8	8	8	8	8	0	0	0	0	0	0
Parking (#/hr)	0	0	0	0	0	0						
Adj. Flow (vph)	0	455	61	338	427	0	20	0	192	1	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	516	0	0	765	0	0	212	0	0	1	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.92	1.10	0.92	0.92	1.10	0.92	0.97	0.97	0.97	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization	81.9%						ICU Level of Service D					
Analysis Period (min)	15											



# HCM Unsignalized Intersection Capacity Analysis

## 1: Appleton St & Appleton Pl & Massachusetts Ave










2020 Existing AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	341	46	284	359	0	17	0	163	1	0	0
Future Volume (Veh/h)	0	341	46	284	359	0	17	0	163	1	0	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			-4%			0%	
Peak Hour Factor	0.75	0.75	0.75	0.84	0.84	0.84	0.85	0.85	0.85	0.92	0.92	0.92
Hourly flow rate (vph)	0	455	61	338	427	0	20	0	192	1	0	0
Pedestrians		109			215			118			215	
Lane Width (ft)		14.0			14.0			12.0			12.0	
Walking Speed (ft/s)		3.5			3.5			3.5			3.5	
Percent Blockage		12			24			11			20	
Right turn flare (veh)												
Median type		None			None							
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	642			634			1816	1922	818	2210	1952	751
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	642			634			1816	1922	818	2210	1952	751
tC, single (s)	4.1			4.1			*4.0	6.5	*3.0	*3.0	*3.0	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			*3.0	4.0	*3.0	3.5	4.0	3.3
p0 queue free %	100			60			85	100	66	99	100	100
cM capacity (veh/h)	757			842			131	29	565	86	183	287
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	516	765	212	1								
Volume Left	0	338	20	1								
Volume Right	61	0	192	0								
cSH	757	842	430	86								
Volume to Capacity	0.00	0.40	0.49	0.01								
Queue Length 95th (ft)	0	49	66	1								
Control Delay (s)	0.0	9.0	21.2	47.5								
Lane LOS		A	C	E								
Approach Delay (s)	0.0	9.0	21.2	47.5								
Approach LOS			C	E								
Intersection Summary												
Average Delay			7.6									
Intersection Capacity Utilization			81.9%	ICU Level of Service						D		
Analysis Period (min)			15									
* User Entered Value												



Lanes, Volumes, Timings  
2: Appleton St & Appleton Pl

2020 Existing AM Peak Hour










						
Lane Group	WBL	WBR	SBL	SBR	NEL	NER
Lane Configurations						
Traffic Volume (vph)	35	29	26	304	151	8
Future Volume (vph)	35	29	26	304	151	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	12	12	12	12
Grade (%)	-4%		0%		-4%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.939		0.876		0.994	
Flt Protected	0.973		0.996		0.955	
Satd. Flow (prot)	1657	0	1628	0	1640	0
Flt Permitted	0.973		0.996		0.955	
Satd. Flow (perm)	1657	0	1628	0	1640	0
Link Speed (mph)	25		25		25	
Link Distance (ft)	178		73		363	
Travel Time (s)	4.9		2.0		9.9	
Confl. Peds. (#/hr)	109	91	91	18	18	109
Confl. Bikes (#/hr)						4
Peak Hour Factor	0.38	0.38	0.84	0.84	0.85	0.85
Heavy Vehicles (%)	6%	0%	0%	2%	1%	0%
Parking (#/hr)					0	0
Adj. Flow (vph)	92	76	31	362	178	9
Shared Lane Traffic (%)						
Lane Group Flow (vph)	168	0	393	0	187	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Right
Median Width(ft)	11		12		12	
Link Offset(ft)	0		0		0	
Crosswalk Width(ft)	16		16		16	
Two way Left Turn Lane						
Headway Factor	1.02	1.02	1.00	1.00	1.12	0.97
Turning Speed (mph)	15	9	15	9	15	9
Sign Control	Stop		Free		Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	58.1%			ICU Level of Service B		
Analysis Period (min)	15					



# HCM Unsignalized Intersection Capacity Analysis

## 2: Appleton St & Appleton Pl

















2020 Existing AM Peak Hour

						
Movement	WBL	WBR	SBL	SBR	NEL	NER
Lane Configurations						
Traffic Volume (veh/h)	35	29	26	304	151	8
Future Volume (Veh/h)	35	29	26	304	151	8
Sign Control	Stop		Free		Stop	
Grade	-4%		0%		-4%	
Peak Hour Factor	0.38	0.38	0.84	0.84	0.85	0.85
Hourly flow rate (vph)	92	76	31	362	178	9
Pedestrians	109		91		109	
Lane Width (ft)	11.0		12.0		12.0	
Walking Speed (ft/s)	3.5		3.5		3.5	
Percent Blockage	10		9		10	
Right turn flare (veh)						
Median type			None			
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	642	200	109		565	461
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	642	200	109		565	461
tC, single (s)	*5.0	*5.0	4.1		*5.0	*5.0
tC, 2 stage (s)						
tF (s)	*3.0	*3.0	2.2		*3.0	*3.0
p0 queue free %	82	91	98		52	99
cM capacity (veh/h)	503	816	1352		370	604
Direction, Lane #	WB 1	SB 1	NE 1			
Volume Total	168	393	187			
Volume Left	0	31	178			
Volume Right	76	362	0			
cSH	609	1352	377			
Volume to Capacity	0.28	0.02	0.50			
Queue Length 95th (ft)	28	2	66			
Control Delay (s)	13.2	0.8	23.6			
Lane LOS	B	A	C			
Approach Delay (s)	13.2	0.8	23.6			
Approach LOS	B		C			
Intersection Summary						
Average Delay			9.3			
Intersection Capacity Utilization			58.1%	ICU Level of Service		B
Analysis Period (min)			15			
* User Entered Value						



Lanes, Volumes, Timings  
3: Burton St/Forest St & Massachusetts Ave

















2020 Existing AM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	91	415	1	10	445	98	0	9	19	65	22	194
Future Volume (vph)	91	415	1	10	445	98	0	9	19	65	22	194
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	14	14	14	12	12	12	12	12	12	12	12	12
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt					0.976			0.908			0.907	
Flt Protected		0.991			0.999						0.989	
Satd. Flow (prot)	0	1675	0	0	1764	0	0	1553	0	0	1670	0
Flt Permitted		0.991			0.999						0.989	
Satd. Flow (perm)	0	1675	0	0	1764	0	0	1553	0	0	1670	0
Link Speed (mph)		15			25			25			15	
Link Distance (ft)		357			87			283			336	
Travel Time (s)		16.2			2.4			7.7			15.3	
Confl. Peds. (#/hr)	57		56	8		9	56		8	9		57
Confl. Bikes (#/hr)			4			1						
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.44	0.44	0.44	0.89	0.89	0.89
Heavy Vehicles (%)	3%	9%	0%	0%	6%	1%	0%	0%	0%	3%	0%	2%
Parking (#/hr)	0	0	0				0	0	0			
Adj. Flow (vph)	105	477	1	11	511	113	0	20	43	73	25	218
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	583	0	0	635	0	0	63	0	0	316	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.92	1.05	0.92	1.00	1.00	1.00	1.00	1.14	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization	93.4%											
Analysis Period (min)	15											
ICU Level of Service F												



# HCM Unsignalized Intersection Capacity Analysis 3: Burton St/Forest St & Massachusetts Ave










2020 Existing AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	91	415	1	10	445	98	0	9	19	65	22	194
Future Volume (Veh/h)	91	415	1	10	445	98	0	9	19	65	22	194
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.44	0.44	0.44	0.89	0.89	0.89
Hourly flow rate (vph)	105	477	1	11	511	113	0	20	43	73	25	218
Pedestrians		57			9			56			57	
Lane Width (ft)		14.0			12.0			12.0			12.0	
Walking Speed (ft/s)		3.5			3.5			3.5			3.5	
Percent Blockage		6			1			5			5	
Right turn flare (veh)												
Median type		None			None							
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	681			534			1620	1446	542	1396	1390	682
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	681			534			1620	1446	542	1396	1390	682
tC, single (s)	4.1			4.1			7.1	*5.0	*5.0	*5.0	*5.0	*5.0
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	*3.0	*3.0	*3.0	*3.0	*3.0
p0 queue free %	88			99			100	91	93	63	89	60
cM capacity (veh/h)	858			988			34	215	659	198	228	541
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	583	635	63	316								
Volume Left	105	11	0	73								
Volume Right	1	113	43	218								
cSH	858	988	398	358								
Volume to Capacity	0.12	0.01	0.16	0.88								
Queue Length 95th (ft)	10	1	14	214								
Control Delay (s)	3.1	0.3	15.7	57.1								
Lane LOS	A	A	C	F								
Approach Delay (s)	3.1	0.3	15.7	57.1								
Approach LOS			C	F								
Intersection Summary												
Average Delay			13.2									
Intersection Capacity Utilization			93.4%	ICU Level of Service				F				
Analysis Period (min)			15									
* User Entered Value												



Lanes, Volumes, Timings  
4: Massachusetts Ave & West Dr










2020 Existing AM Peak Hour

						
Lane Group	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations						
Traffic Volume (vph)	22	477	552	6	1	1
Future Volume (vph)	22	477	552	6	1	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	14	14	10	10
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt			0.999		0.932	
Flt Protected		0.998			0.976	
Satd. Flow (prot)	0	1585	1720	0	1613	0
Flt Permitted		0.998			0.976	
Satd. Flow (perm)	0	1585	1720	0	1613	0
Link Speed (mph)		25	15		10	
Link Distance (ft)		87	240		169	
Travel Time (s)		2.4	10.9		11.5	
Confl. Peds. (#/hr)	8			8	8	8
Confl. Bikes (#/hr)				1		
Peak Hour Factor	0.87	0.87	0.87	0.87	0.25	0.25
Heavy Vehicles (%)	0%	8%	6%	1%	0%	0%
Parking (#/hr)	0	0	0	0		
Adj. Flow (vph)	25	548	634	7	4	4
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	573	641	0	8	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		10	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.14	1.05	0.92	1.09	1.09
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	55.3%			ICU Level of Service B		
Analysis Period (min)	15					



# HCM Unsignalized Intersection Capacity Analysis 4: Massachusetts Ave & West Dr

2020 Existing AM Peak Hour

						
Movement	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations						
Traffic Volume (veh/h)	22	477	552	6	1	1
Future Volume (Veh/h)	22	477	552	6	1	1
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.87	0.87	0.87	0.87	0.25	0.25
Hourly flow rate (vph)	25	548	634	7	4	4
Pedestrians		8	8		8	
Lane Width (ft)		12.0	14.0		10.0	
Walking Speed (ft/s)		3.5	3.5		3.5	
Percent Blockage		1	1		1	
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	649				1252	654
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	649				1252	654
tC, single (s)	4.1				*5.0	*5.0
tC, 2 stage (s)						
tF (s)	2.2				*3.0	*3.0
p0 queue free %	97				99	99
cM capacity (veh/h)	941				326	619
Direction, Lane #	EB 1	WB 1	SW 1			
Volume Total	573	641	8			
Volume Left	25	0	4			
Volume Right	0	7	4			
cSH	941	1700	427			
Volume to Capacity	0.03	0.38	0.02			
Queue Length 95th (ft)	2	0	1			
Control Delay (s)	0.7	0.0	13.6			
Lane LOS	A		B			
Approach Delay (s)	0.7	0.0	13.6			
Approach LOS			B			
<b>Intersection Summary</b>						
Average Delay			0.4			
Intersection Capacity Utilization			55.3%	ICU Level of Service		B
Analysis Period (min)			15			
* User Entered Value						



Lanes, Volumes, Timings  
5: Pine Ct & Massachusetts Ave










2020 Existing AM Peak Hour

	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↰			↰	↰	
Traffic Volume (vph)	484	2	0	553	1	7
Future Volume (vph)	484	2	0	553	1	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	14	14	14	14	12	12
Grade (%)	0%			0%	-4%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt					0.882	
Flt Protected					0.994	
Satd. Flow (prot)	1506	0	0	1563	1529	0
Flt Permitted					0.994	
Satd. Flow (perm)	1506	0	0	1563	1529	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	240			134	415	
Travel Time (s)	6.5			3.7	11.3	
Confl. Peds. (#/hr)		10	10		10	10
Confl. Bikes (#/hr)		3				
Peak Hour Factor	0.85	0.85	0.88	0.88	0.50	0.50
Heavy Vehicles (%)	9%	0%	0%	5%	0%	0%
Parking (#/hr)	0	0	0	0		
Adj. Flow (vph)	569	2	0	628	2	14
Shared Lane Traffic (%)						
Lane Group Flow (vph)	571	0	0	628	16	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.20	1.05	1.05	1.20	1.12	1.12
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	CBD					
Control Type:	Unsignalized					
Intersection Capacity Utilization	45.2%			ICU Level of Service A		
Analysis Period (min)	15					



# HCM Unsignalized Intersection Capacity Analysis 5: Pine Ct & Massachusetts Ave










2020 Existing AM Peak Hour

						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	484	2	0	553	1	7
Future Volume (Veh/h)	484	2	0	553	1	7
Sign Control	Free			Free	Stop	
Grade	0%			0%	-4%	
Peak Hour Factor	0.85	0.85	0.88	0.88	0.50	0.50
Hourly flow rate (vph)	569	2	0	628	2	14
Pedestrians	10			10	10	
Lane Width (ft)	14.0			14.0	12.0	
Walking Speed (ft/s)	3.5			3.5	3.5	
Percent Blockage	1			1	1	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			581		1218	590
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			581		1218	590
tC, single (s)			4.1		*5.0	*5.0
tC, 2 stage (s)						
tF (s)			2.2		*3.0	*3.0
p0 queue free %			100		99	98
cM capacity (veh/h)			994		345	656
Direction, Lane #	EB 1	WB 1	NB 1			
Volume Total	571	628	16			
Volume Left	0	0	2			
Volume Right	2	0	14			
cSH	1700	994	589			
Volume to Capacity	0.34	0.00	0.03			
Queue Length 95th (ft)	0	0	2			
Control Delay (s)	0.0	0.0	11.3			
Lane LOS			B			
Approach Delay (s)	0.0	0.0	11.3			
Approach LOS			B			
Intersection Summary						
Average Delay			0.1			
Intersection Capacity Utilization			45.2%	ICU Level of Service		A
Analysis Period (min)			15			
* User Entered Value						



Lanes, Volumes, Timings  
6: Massachusetts Ave & Quinn Rd

2020 Existing AM Peak Hour










						
Lane Group	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Traffic Volume (vph)	28	466	547	10	3	7
Future Volume (vph)	28	466	547	10	3	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	14	14	14	14
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt			0.998		0.907	
Flt Protected		0.997			0.985	
Satd. Flow (prot)	0	1758	1677	0	1652	0
Flt Permitted		0.997			0.985	
Satd. Flow (perm)	0	1758	1677	0	1652	0
Link Speed (mph)		25	25		25	
Link Distance (ft)		134	384		203	
Travel Time (s)		3.7	10.5		5.5	
Confl. Peds. (#/hr)	10			10	10	10
Confl. Bikes (#/hr)				3		
Peak Hour Factor	0.85	0.85	0.88	0.88	0.62	0.62
Heavy Vehicles (%)	4%	8%	5%	0%	0%	14%
Parking (#/hr)			6	0		
Adj. Flow (vph)	33	548	622	11	5	11
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	581	633	0	16	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		14	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.10	0.92	0.92	0.92
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	60.3%			ICU Level of Service B		
Analysis Period (min)	15					



# HCM Unsignalized Intersection Capacity Analysis

## 6: Massachusetts Ave & Quinn Rd










2020 Existing AM Peak Hour

						
Movement	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Traffic Volume (veh/h)	28	466	547	10	3	7
Future Volume (Veh/h)	28	466	547	10	3	7
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.85	0.85	0.88	0.88	0.62	0.62
Hourly flow rate (vph)	33	548	622	11	5	11
Pedestrians		10	10		10	
Lane Width (ft)		12.0	14.0		14.0	
Walking Speed (ft/s)		3.5	3.5		3.5	
Percent Blockage		1	1		1	
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	643				1262	648
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	643				1262	648
tC, single (s)	4.1				*5.0	*5.0
tC, 2 stage (s)						
tF (s)	2.2				*3.0	*3.0
p0 queue free %	96				98	98
cM capacity (veh/h)	922				317	619
Direction, Lane #	SE 1	NW 1	SW 1			
Volume Total	581	633	16			
Volume Left	33	0	5			
Volume Right	0	11	11			
cSH	922	1700	477			
Volume to Capacity	0.04	0.37	0.03			
Queue Length 95th (ft)	3	0	3			
Control Delay (s)	1.0	0.0	12.8			
Lane LOS	A		B			
Approach Delay (s)	1.0	0.0	12.8			
Approach LOS			B			
Intersection Summary						
Average Delay			0.6			
Intersection Capacity Utilization			60.3%	ICU Level of Service		B
Analysis Period (min)			15			
* User Entered Value						



Lanes, Volumes, Timings  
7: West Dr/Mill Brook Br & Quinn Access Rd










2020 Existing AM Peak Hour

						
Lane Group	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Volume (vph)	2	1	18	8	5	2
Future Volume (vph)	2	1	18	8	5	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	9	9
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.966		0.959			
Flt Protected	0.964					0.966
Satd. Flow (prot)	1592	0	1822	0	0	1449
Flt Permitted	0.964					0.966
Satd. Flow (perm)	1592	0	1822	0	0	1449
Link Speed (mph)	25		25			25
Link Distance (ft)	315		169			187
Travel Time (s)	8.6		4.6			5.1
Peak Hour Factor	0.75	0.75	0.61	0.61	0.35	0.35
Heavy Vehicles (%)	0%	0%	0%	0%	20%	0%
Parking (#/hr)	0	0				
Adj. Flow (vph)	3	1	30	13	14	6
Shared Lane Traffic (%)						
Lane Group Flow (vph)	4	0	43	0	0	20
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.14	1.00	1.00	1.00	1.14	1.14
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	14.5%			ICU Level of Service A		
Analysis Period (min)	15					



# HCM Unsignalized Intersection Capacity Analysis 7: West Dr/Mill Brook Br & Quinn Access Rd

















2020 Existing AM Peak Hour

						
Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Volume (veh/h)	2	1	18	8	5	2
Future Volume (Veh/h)	2	1	18	8	5	2
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.75	0.75	0.61	0.61	0.35	0.35
Hourly flow rate (vph)	3	1	30	13	14	6
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	70	36			43	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	70	36			43	
tC, single (s)	6.4	6.2			4.3	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.4	
p0 queue free %	100	100			99	
cM capacity (veh/h)	930	1042			1457	
Direction, Lane #	NW 1	NE 1	SW 1			
Volume Total	4	43	20			
Volume Left	3	0	14			
Volume Right	1	13	0			
cSH	955	1700	1457			
Volume to Capacity	0.00	0.03	0.01			
Queue Length 95th (ft)	0	0	1			
Control Delay (s)	8.8	0.0	5.3			
Lane LOS	A		A			
Approach Delay (s)	8.8	0.0	5.3			
Approach LOS	A					
<b>Intersection Summary</b>						
Average Delay			2.1			
Intersection Capacity Utilization			14.5%	ICU Level of Service		A
Analysis Period (min)			15			



Lanes, Volumes, Timings  
8: Forest St & Peirce St/Ryder St

















2020 Existing AM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	0	1	8	0	3	3	171	9	10	269	63
Future Volume (vph)	10	0	1	8	0	3	3	171	9	10	269	63
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	12	12	12	11	11	11
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.986			0.966			0.993			0.975	
Flt Protected		0.957			0.964			0.999			0.998	
Satd. Flow (prot)	0	1733	0	0	1440	0	0	1827	0	0	1767	0
Flt Permitted		0.957			0.964			0.999			0.998	
Satd. Flow (perm)	0	1733	0	0	1440	0	0	1827	0	0	1767	0
Link Speed (mph)		25			25			20			25	
Link Distance (ft)		451			157			336			396	
Travel Time (s)		12.3			4.3			11.5			10.8	
Confl. Peds. (#/hr)	10		13	3			13		3			10
Peak Hour Factor	0.55	0.55	0.55	0.69	0.69	0.69	0.82	0.82	0.82	0.86	0.86	0.86
Heavy Vehicles (%)	0%	0%	0%	25%	0%	0%	33%	1%	33%	0%	1%	2%
Adj. Flow (vph)	18	0	2	12	0	4	4	209	11	12	313	73
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	20	0	0	16	0	0	224	0	0	398	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.04	1.04	1.04	1.04	1.04	1.04	1.00	1.00	1.00	1.04	1.04	1.04
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization	37.3%											
Analysis Period (min)	15											
	ICU Level of Service A											



# HCM Unsignalized Intersection Capacity Analysis 8: Forest St & Peirce St/Ryder St










2020 Existing AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	0	1	8	0	3	3	171	9	10	269	63
Future Volume (Veh/h)	10	0	1	8	0	3	3	171	9	10	269	63
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.55	0.55	0.55	0.69	0.69	0.69	0.82	0.82	0.82	0.86	0.86	0.86
Hourly flow rate (vph)	18	0	2	12	0	4	4	209	11	12	313	73
Pedestrians		13			3			13			10	
Lane Width (ft)		11.0			11.0			12.0			11.0	
Walking Speed (ft/s)		3.5			3.5			3.5			3.5	
Percent Blockage		1			0			1			1	
Right turn flare (veh)												
Median type								None			None	
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	623	618	376	614	648	228	399			223		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	623	618	376	614	648	228	399			223		
tC, single (s)	7.1	6.5	6.2	7.3	6.5	6.2	4.4			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.7	4.0	3.3	2.5			2.2		
p0 queue free %	95	100	100	97	100	100	100			99		
cM capacity (veh/h)	383	397	659	359	381	808	999			1354		
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	20	16	224	398								
Volume Left	18	12	4	12								
Volume Right	2	4	11	73								
cSH	400	417	999	1354								
Volume to Capacity	0.05	0.04	0.00	0.01								
Queue Length 95th (ft)	4	3	0	1								
Control Delay (s)	14.5	14.0	0.2	0.3								
Lane LOS	B	B	A	A								
Approach Delay (s)	14.5	14.0	0.2	0.3								
Approach LOS	B	B										
Intersection Summary												
Average Delay			1.0									
Intersection Capacity Utilization			37.3%		ICU Level of Service					A		
Analysis Period (min)			15									



Lanes, Volumes, Timings  
9: Ryder St & South Dr

2020 Existing AM Peak Hour










						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	2	1	7	13	4	9
Future Volume (vph)	2	1	7	13	4	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.949		0.913			
Flt Protected	0.970					0.985
Satd. Flow (prot)	1749	0	1417	0	0	1463
Flt Permitted	0.970					0.985
Satd. Flow (perm)	1749	0	1417	0	0	1463
Link Speed (mph)	25		25			25
Link Distance (ft)	269		157			797
Travel Time (s)	7.3		4.3			21.7
Confl. Peds. (#/hr)	32	32		32	32	
Confl. Bikes (#/hr)				2		
Peak Hour Factor	0.38	0.38	0.71	0.71	0.81	0.81
Heavy Vehicles (%)	0%	0%	14%	8%	0%	22%
Parking (#/hr)			0	0	0	0
Adj. Flow (vph)	5	3	10	18	5	11
Shared Lane Traffic (%)						
Lane Group Flow (vph)	8	0	28	0	0	16
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.14	1.00	1.00	1.14
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	26.5%			ICU Level of Service A		
Analysis Period (min)	15					



# HCM Unsignalized Intersection Capacity Analysis

## 9: Ryder St & South Dr

















2020 Existing AM Peak Hour

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	2	1	7	13	4	9
Future Volume (Veh/h)	2	1	7	13	4	9
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.38	0.38	0.71	0.71	0.81	0.81
Hourly flow rate (vph)	5	3	10	18	5	11
Pedestrians	32		32			32
Lane Width (ft)	12.0		12.0			12.0
Walking Speed (ft/s)	3.5		3.5			3.5
Percent Blockage	3		3			3
Right turn flare (veh)						
Median type			None			None
Median storage veh						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	104	83			60	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	104	83			60	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	99	100			100	
cM capacity (veh/h)	842	923			1509	
Direction, Lane #	WB 1	NB 1	SB 1			
Volume Total	8	28	16			
Volume Left	5	0	5			
Volume Right	3	18	0			
cSH	871	1700	1509			
Volume to Capacity	0.01	0.02	0.00			
Queue Length 95th (ft)	1	0	0			
Control Delay (s)	9.2	0.0	2.3			
Lane LOS	A		A			
Approach Delay (s)	9.2	0.0	2.3			
Approach LOS	A					
Intersection Summary						
Average Delay			2.1			
Intersection Capacity Utilization			26.5%	ICU Level of Service		A
Analysis Period (min)			15			



Lanes, Volumes, Timings  
1: Appleton St & Appleton Pl & Massachusetts Ave

2020 Existing PM Peak Hour

















												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	3	423	18	114	318	2	18	1	331	1	1	3
Future Volume (vph)	3	423	18	114	318	2	18	1	331	1	1	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	14	14	14	14	14	14	12	12	12	12	12	12
Grade (%)		0%			0%			-4%			0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.995			0.999			0.872			0.925	
Flt Protected					0.987			0.997			0.989	
Satd. Flow (prot)	0	1724	0	0	1699	0	0	1669	0	0	1738	0
Flt Permitted					0.987			0.997			0.989	
Satd. Flow (perm)	0	1724	0	0	1699	0	0	1669	0	0	1738	0
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		330			357			73			97	
Travel Time (s)		9.0			9.7			2.0			2.6	
Confl. Peds. (#/hr)	21		1	7		27	1		7	27		21
Confl. Bikes (#/hr)			2			2						
Peak Hour Factor	0.93	0.93	0.93	0.88	0.88	0.88	0.90	0.90	0.90	0.62	0.62	0.62
Heavy Vehicles (%)	0%	2%	0%	1%	3%	0%	0%	0%	1%	0%	0%	0%
Bus Blockages (#/hr)	8	8	8	8	8	8	0	0	0	0	0	0
Parking (#/hr)	0	0	0	0	0	0						
Adj. Flow (vph)	3	455	19	130	361	2	20	1	368	2	2	5
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	477	0	0	493	0	0	389	0	0	9	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.92	1.10	0.92	0.92	1.10	0.92	0.97	0.97	0.97	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization 80.4%	ICU Level of Service D											
Analysis Period (min) 15												



# HCM Unsignalized Intersection Capacity Analysis

## 1: Appleton St & Appleton Pl & Massachusetts Ave










2020 Existing PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	3	423	18	114	318	2	18	1	331	1	1	3
Future Volume (Veh/h)	3	423	18	114	318	2	18	1	331	1	1	3
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			-4%			0%	
Peak Hour Factor	0.93	0.93	0.93	0.88	0.88	0.88	0.90	0.90	0.90	0.62	0.62	0.62
Hourly flow rate (vph)	3	455	19	130	361	2	20	1	368	2	2	5
Pedestrians		21			27			7			27	
Lane Width (ft)		14.0			14.0			12.0			12.0	
Walking Speed (ft/s)		3.5			3.5			3.5			3.5	
Percent Blockage		2			3			1			3	
Right turn flare (veh)												
Median type		None			None							
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	390			481			1126	1128	498	1515	1136	410
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	390			481			1126	1128	498	1515	1136	410
tC, single (s)	4.1			4.1			*5.0	*5.0	*5.0	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			*3.0	*3.0	*3.0	3.5	4.0	3.3
p0 queue free %	100			88			94	100	48	95	99	99
cM capacity (veh/h)	1149			1080			326	328	707	40	173	615
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	477	493	389	9								
Volume Left	3	130	20	2								
Volume Right	19	2	368	5								
cSH	1149	1080	665	128								
Volume to Capacity	0.00	0.12	0.58	0.07								
Queue Length 95th (ft)	0	10	95	6								
Control Delay (s)	0.1	3.3	17.7	35.2								
Lane LOS	A	A	C	E								
Approach Delay (s)	0.1	3.3	17.7	35.2								
Approach LOS			C	E								
Intersection Summary												
Average Delay			6.5									
Intersection Capacity Utilization			80.4%		ICU Level of Service				D			
Analysis Period (min)			15									
* User Entered Value												



Lanes, Volumes, Timings  
2: Appleton St & Appleton Pl










2020 Existing PM Peak Hour

						
Lane Group	WBL	WBR	SBL	SBR	NEL	NER
Lane Configurations						
Traffic Volume (vph)	3	23	10	123	327	5
Future Volume (vph)	3	23	10	123	327	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	12	12	12	12
Grade (%)	-4%		0%		-4%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.882		0.875		0.998	
Flt Protected	0.994		0.996		0.953	
Satd. Flow (prot)	1642	0	1626	0	1643	0
Flt Permitted	0.994		0.996		0.953	
Satd. Flow (perm)	1642	0	1626	0	1643	0
Link Speed (mph)	25		25		25	
Link Distance (ft)	178		73		363	
Travel Time (s)	4.9		2.0		9.9	
Confl. Peds. (#/hr)	20	18	9	11	11	20
Peak Hour Factor	0.65	0.65	0.84	0.84	0.90	0.90
Heavy Vehicles (%)	0%	0%	0%	2%	1%	0%
Parking (#/hr)					0	0
Adj. Flow (vph)	5	35	12	146	363	6
Shared Lane Traffic (%)						
Lane Group Flow (vph)	40	0	158	0	369	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Right
Median Width(ft)	11		12		12	
Link Offset(ft)	0		0		0	
Crosswalk Width(ft)	16		16		16	
Two way Left Turn Lane						
Headway Factor	1.02	1.02	1.00	1.00	1.12	0.97
Turning Speed (mph)	15	9	15	9	15	9
Sign Control	Stop		Free		Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	46.8%			ICU Level of Service A		
Analysis Period (min)	15					



# HCM Unsignalized Intersection Capacity Analysis 2: Appleton St & Appleton Pl

















2020 Existing PM Peak Hour

						
Movement	WBL	WBR	SBL	SBR	NEL	NER
Lane Configurations						
Traffic Volume (veh/h)	3	23	10	123	327	5
Future Volume (Veh/h)	3	23	10	123	327	5
Sign Control	Stop		Free		Stop	
Grade	-4%		0%		-4%	
Peak Hour Factor	0.65	0.65	0.84	0.84	0.90	0.90
Hourly flow rate (vph)	5	35	12	146	363	6
Pedestrians	20		18		20	
Lane Width (ft)	11.0		12.0		12.0	
Walking Speed (ft/s)	3.5		3.5		3.5	
Percent Blockage	2		2		2	
Right turn flare (veh)						
Median type			None			
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	210	38	20		172	137
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	210	38	20		172	137
tC, single (s)	*5.0	*5.0	4.1		*5.0	*5.0
tC, 2 stage (s)						
tF (s)	*3.0	*3.0	2.2		*3.0	*3.0
p0 queue free %	99	97	99		60	99
cM capacity (veh/h)	935	1117	1581		912	1004
Direction, Lane #	WB 1	SB 1	NE 1			
Volume Total	40	158	369			
Volume Left	0	12	363			
Volume Right	35	146	0			
cSH	1090	1581	913			
Volume to Capacity	0.04	0.01	0.40			
Queue Length 95th (ft)	3	1	49			
Control Delay (s)	8.4	0.6	11.6			
Lane LOS	A	A	B			
Approach Delay (s)	8.4	0.6	11.6			
Approach LOS	A		B			
Intersection Summary						
Average Delay			8.3			
Intersection Capacity Utilization			46.8%	ICU Level of Service		A
Analysis Period (min)			15			
* User Entered Value						



Lanes, Volumes, Timings  
3: Burton St/Forest St & Massachusetts Ave

2020 Existing PM Peak Hour

















												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	201	562	2	3	375	92	1	3	8	38	4	65
Future Volume (vph)	201	562	2	3	375	92	1	3	8	38	4	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	14	14	14	12	12	12	12	12	12	12	12	12
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt					0.973			0.912			0.918	
Flt Protected		0.987						0.995			0.983	
Satd. Flow (prot)	0	1676	0	0	1799	0	0	1552	0	0	1715	0
Flt Permitted		0.987						0.995			0.983	
Satd. Flow (perm)	0	1676	0	0	1799	0	0	1552	0	0	1715	0
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		357			87			283			336	
Travel Time (s)		9.7			2.4			7.7			9.2	
Confl. Peds. (#/hr)	19		21			2	19		14	16		21
Confl. Bikes (#/hr)			2			3						1
Peak Hour Factor	0.93	0.93	0.93	0.88	0.88	0.88	0.60	0.60	0.60	0.81	0.81	0.81
Heavy Vehicles (%)	3%	9%	0%	0%	3%	2%	0%	0%	0%	0%	0%	0%
Parking (#/hr)	0	0	0				0	0	0			
Adj. Flow (vph)	216	604	2	3	426	105	2	5	13	47	5	80
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	822	0	0	534	0	0	20	0	0	132	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.92	1.05	0.92	1.00	1.00	1.00	1.00	1.14	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization	90.6%											
Analysis Period (min)	15											
ICU Level of Service E												



# HCM Unsignalized Intersection Capacity Analysis

## 3: Burton St/Forest St & Massachusetts Ave










2020 Existing PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	201	562	2	3	375	92	1	3	8	38	4	65
Future Volume (Veh/h)	201	562	2	3	375	92	1	3	8	38	4	65
Sign Control	Free			Free			Stop			Stop		
Grade	0%			0%			0%			0%		
Peak Hour Factor	0.93	0.93	0.93	0.88	0.88	0.88	0.60	0.60	0.60	0.81	0.81	0.81
Hourly flow rate (vph)	216	604	2	3	426	105	2	5	13	47	5	80
Pedestrians	21			16			21			19		
Lane Width (ft)	14.0			12.0			12.0			12.0		
Walking Speed (ft/s)	3.5			3.5			3.5			3.5		
Percent Blockage	2			2			2			2		
Right turn flare (veh)												
Median type	None			None								
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	550				627				1646	1614	642	1572
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	550				627				1646	1614	642	1572
tC, single (s)	4.1				4.1				*5.0	*5.0	*5.0	*5.0
tC, 2 stage (s)												
tF (s)	2.2				2.2				*3.0	*3.0	*3.0	*3.0
p0 queue free %	78				100				99	97	98	74
cM capacity (veh/h)	996				945				150	174	613	182
										184	184	690
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	822	534	20	132								
Volume Left	216	3	2	47								
Volume Right	2	105	13	80								
cSH	996	945	316	328								
Volume to Capacity	0.22	0.00	0.06	0.40								
Queue Length 95th (ft)	21	0	5	47								
Control Delay (s)	4.9	0.1	17.1	23.1								
Lane LOS	A	A	C	C								
Approach Delay (s)	4.9	0.1	17.1	23.1								
Approach LOS				C	C							
Intersection Summary												
Average Delay				5.0								
Intersection Capacity Utilization				90.6%	ICU Level of Service				E			
Analysis Period (min)				15								
* User Entered Value												



Lanes, Volumes, Timings  
4: Massachusetts Ave & West Dr










2020 Existing PM Peak Hour

						
Lane Group	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations						
Traffic Volume (vph)	6	602	453	2	6	17
Future Volume (vph)	6	602	453	2	6	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	14	14	10	10
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt			0.999		0.899	
Flt Protected					0.988	
Satd. Flow (prot)	0	1677	1769	0	1575	0
Flt Permitted					0.988	
Satd. Flow (perm)	0	1677	1769	0	1575	0
Link Speed (mph)		25	25		25	
Link Distance (ft)		87	240		169	
Travel Time (s)		2.4	6.5		4.6	
Confl. Peds. (#/hr)					19	19
Confl. Bikes (#/hr)				3		
Peak Hour Factor	0.93	0.93	0.88	0.88	0.64	0.64
Heavy Vehicles (%)	0%	2%	3%	0%	0%	0%
Parking (#/hr)	0	0	0	0		
Adj. Flow (vph)	6	647	515	2	9	27
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	653	517	0	36	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		10	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.14	1.05	0.92	1.09	1.09
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	51.2%			ICU Level of Service A		
Analysis Period (min)	15					



# HCM Unsignalized Intersection Capacity Analysis 4: Massachusetts Ave & West Dr

2020 Existing PM Peak Hour

						
Movement	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations						
Traffic Volume (veh/h)	6	602	453	2	6	17
Future Volume (Veh/h)	6	602	453	2	6	17
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.93	0.93	0.88	0.88	0.64	0.64
Hourly flow rate (vph)	6	647	515	2	9	27
Pedestrians		19	19			
Lane Width (ft)		12.0	14.0			
Walking Speed (ft/s)		3.5	3.5			
Percent Blockage		2	2			
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	517				1194	535
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	517				1194	535
tC, single (s)	4.1				*5.0	*5.0
tC, 2 stage (s)						
tF (s)	2.2				*3.0	*3.0
p0 queue free %	99				97	96
cM capacity (veh/h)	1059				351	695
Direction, Lane #	EB 1	WB 1	SW 1			
Volume Total	653	517	36			
Volume Left	6	0	9			
Volume Right	0	2	27			
cSH	1059	1700	558			
Volume to Capacity	0.01	0.30	0.06			
Queue Length 95th (ft)	0	0	5			
Control Delay (s)	0.2	0.0	11.9			
Lane LOS	A		B			
Approach Delay (s)	0.2	0.0	11.9			
Approach LOS			B			
Intersection Summary						
Average Delay			0.4			
Intersection Capacity Utilization			51.2%	ICU Level of Service		A
Analysis Period (min)			15			
* User Entered Value						



Lanes, Volumes, Timings  
5: Pine Ct & Massachusetts Ave










2020 Existing PM Peak Hour

	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↗			↖	↗	
Traffic Volume (vph)	606	3	2	456	1	1
Future Volume (vph)	606	3	2	456	1	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	14	14	14	14	12	12
Grade (%)	0%			0%	-4%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.999				0.932	
Flt Protected					0.976	
Satd. Flow (prot)	1608	0	0	1641	1587	0
Flt Permitted					0.976	
Satd. Flow (perm)	1608	0	0	1641	1587	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	240			134	415	
Travel Time (s)	6.5			3.7	11.3	
Confl. Peds. (#/hr)		8	8		8	8
Confl. Bikes (#/hr)		1				
Peak Hour Factor	0.92	0.92	0.90	0.90	0.50	0.50
Heavy Vehicles (%)	2%	0%	3%	0%	0%	0%
Parking (#/hr)	0	0	0	0		
Adj. Flow (vph)	659	3	2	507	2	2
Shared Lane Traffic (%)						
Lane Group Flow (vph)	662	0	0	509	4	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.20	1.05	1.05	1.20	1.12	1.12
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	CBD					
Control Type:	Unsignalized					
Intersection Capacity Utilization	48.0%			ICU Level of Service A		
Analysis Period (min)	15					



# HCM Unsignalized Intersection Capacity Analysis 5: Pine Ct & Massachusetts Ave










2020 Existing PM Peak Hour

						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	606	3	2	456	1	1
Future Volume (Veh/h)	606	3	2	456	1	1
Sign Control	Free			Free	Stop	
Grade	0%			0%	-4%	
Peak Hour Factor	0.92	0.92	0.90	0.90	0.50	0.50
Hourly flow rate (vph)	659	3	2	507	2	2
Pedestrians	8			8	8	
Lane Width (ft)	14.0			14.0	12.0	
Walking Speed (ft/s)	3.5			3.5	3.5	
Percent Blockage	1			1	1	
Right turn flare (veh)						
Median type	None			None		
Median storage veh						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			670		1188	676
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			670		1188	676
tC, single (s)			4.1		*5.0	*5.0
tC, 2 stage (s)						
tF (s)			2.2		*3.0	*3.0
p0 queue free %			100		99	100
cM capacity (veh/h)			909		356	603
Direction, Lane #	EB 1	WB 1	NB 1			
Volume Total	662	509	4			
Volume Left	0	2	2			
Volume Right	3	0	2			
cSH	1700	909	448			
Volume to Capacity	0.39	0.00	0.01			
Queue Length 95th (ft)	0	0	1			
Control Delay (s)	0.0	0.1	13.1			
Lane LOS		A	B			
Approach Delay (s)	0.0	0.1	13.1			
Approach LOS			B			
Intersection Summary						
Average Delay		0.1				
Intersection Capacity Utilization		48.0%	ICU Level of Service	A		
Analysis Period (min)		15				
* User Entered Value						



Lanes, Volumes, Timings  
6: Massachusetts Ave & Quinn Rd










2020 Existing PM Peak Hour

						
Lane Group	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Traffic Volume (vph)	4	600	439	5	13	19
Future Volume (vph)	4	600	439	5	13	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	14	14	14	14
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt			0.998		0.920	
Flt Protected					0.980	
Satd. Flow (prot)	0	1863	1726	0	1775	0
Flt Permitted					0.980	
Satd. Flow (perm)	0	1863	1726	0	1775	0
Link Speed (mph)		25	25		25	
Link Distance (ft)		134	384		203	
Travel Time (s)		3.7	10.5		5.5	
Confl. Peds. (#/hr)	20			21	21	20
Confl. Bikes (#/hr)				7		
Peak Hour Factor	0.98	0.98	0.90	0.90	0.50	0.50
Heavy Vehicles (%)	0%	2%	2%	0%	0%	5%
Parking (#/hr)			6	0		
Adj. Flow (vph)	4	612	488	6	26	38
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	616	494	0	64	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		14	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.10	0.92	0.92	0.92
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	49.6%			ICU Level of Service A		
Analysis Period (min)	15					



# HCM Unsignalized Intersection Capacity Analysis 6: Massachusetts Ave & Quinn Rd










2020 Existing PM Peak Hour

						
Movement	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Traffic Volume (veh/h)	4	600	439	5	13	19
Future Volume (Veh/h)	4	600	439	5	13	19
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.98	0.98	0.90	0.90	0.50	0.50
Hourly flow rate (vph)	4	612	488	6	26	38
Pedestrians		20	21		21	
Lane Width (ft)		12.0	14.0		14.0	
Walking Speed (ft/s)		3.5	3.5		3.5	
Percent Blockage		2	2		2	
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	515				1153	532
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	515				1153	532
tC, single (s)	4.1				*5.0	*5.0
tC, 2 stage (s)						
tF (s)	2.2				*3.0	*3.0
p0 queue free %	100				93	94
cM capacity (veh/h)	1036				358	680
Direction, Lane #	SE 1	NW 1	SW 1			
Volume Total	616	494	64			
Volume Left	4	0	26			
Volume Right	0	6	38			
cSH	1036	1700	498			
Volume to Capacity	0.00	0.29	0.13			
Queue Length 95th (ft)	0	0	11			
Control Delay (s)	0.1	0.0	13.3			
Lane LOS	A		B			
Approach Delay (s)	0.1	0.0	13.3			
Approach LOS			B			
Intersection Summary						
Average Delay			0.8			
Intersection Capacity Utilization			49.6%	ICU Level of Service		A
Analysis Period (min)			15			
* User Entered Value						



Lanes, Volumes, Timings  
7: West Dr/Mill Brook Br & Quinn Access Rd










2020 Existing PM Peak Hour

						
Lane Group	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Volume (vph)	11	0	3	5	0	20
Future Volume (vph)	11	0	3	5	0	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	9	9
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt			0.913			
Flt Protected	0.950					
Satd. Flow (prot)	1624	0	1735	0	0	1693
Flt Permitted	0.950					
Satd. Flow (perm)	1624	0	1735	0	0	1693
Link Speed (mph)	25		25			25
Link Distance (ft)	315		169			187
Travel Time (s)	8.6		4.6			5.1
Confl. Peds. (#/hr)	2	2		2	2	
Peak Hour Factor	0.58	0.58	0.58	0.58	0.50	0.50
Heavy Vehicles (%)	0%	0%	0%	0%	0%	1%
Parking (#/hr)	0	0				
Adj. Flow (vph)	19	0	5	9	0	40
Shared Lane Traffic (%)						
Lane Group Flow (vph)	19	0	14	0	0	40
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.14	1.00	1.00	1.00	1.14	1.14
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	14.6%			ICU Level of Service A		
Analysis Period (min)	15					



# HCM Unsignalized Intersection Capacity Analysis 7: West Dr/Mill Brook Br & Quinn Access Rd

















2020 Existing PM Peak Hour

						
Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Volume (veh/h)	11	0	3	5	0	20
Future Volume (Veh/h)	11	0	3	5	0	20
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.58	0.58	0.58	0.58	0.50	0.50
Hourly flow rate (vph)	19	0	5	9	0	40
Pedestrians	2		2			2
Lane Width (ft)	12.0		12.0			9.0
Walking Speed (ft/s)	3.5		3.5			3.5
Percent Blockage	0		0			0
Right turn flare (veh)						
Median type			None			None
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	54	14			16	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	54	14			16	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	98	100			100	
cM capacity (veh/h)	956	1069			1612	
Direction, Lane #	NW 1	NE 1	SW 1			
Volume Total	19	14	40			
Volume Left	19	0	0			
Volume Right	0	9	0			
cSH	956	1700	1612			
Volume to Capacity	0.02	0.01	0.00			
Queue Length 95th (ft)	2	0	0			
Control Delay (s)	8.8	0.0	0.0			
Lane LOS	A					
Approach Delay (s)	8.8	0.0	0.0			
Approach LOS	A					
Intersection Summary						
Average Delay			2.3			
Intersection Capacity Utilization			14.6%	ICU Level of Service		A
Analysis Period (min)			15			



Lanes, Volumes, Timings  
8: Forest St & Peirce St/Ryder St

















2020 Existing PM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	7	1	2	9	1	5	4	273	4	5	90	5
Future Volume (vph)	7	1	2	9	1	5	4	273	4	5	90	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	12	12	12	11	11	11
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.975			0.961			0.998			0.993	
Flt Protected		0.965			0.974			0.999			0.997	
Satd. Flow (prot)	0	1728	0	0	1719	0	0	1870	0	0	1818	0
Flt Permitted		0.965			0.974			0.999			0.997	
Satd. Flow (perm)	0	1728	0	0	1719	0	0	1870	0	0	1818	0
Link Speed (mph)		25			25			20			25	
Link Distance (ft)		451			157			336			396	
Travel Time (s)		12.3			4.3			11.5			10.8	
Confl. Peds. (#/hr)	5		6	2		1	6		2	1		5
Confl. Bikes (#/hr)						1						
Peak Hour Factor	0.83	0.83	0.83	0.67	0.25	0.75	0.93	0.93	0.93	0.84	0.84	0.84
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	25%	1%	0%	0%	0%	0%
Adj. Flow (vph)	8	1	2	13	4	7	4	294	4	6	107	6
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	11	0	0	24	0	0	302	0	0	119	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.04	1.04	1.04	1.04	1.04	1.04	1.00	1.00	1.00	1.04	1.04	1.04
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization	27.7%											
Analysis Period (min)	15											
ICU Level of Service A												



# HCM Unsignalized Intersection Capacity Analysis 8: Forest St & Peirce St/Ryder St










2020 Existing PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	7	1	2	9	1	5	4	273	4	5	90	5
Future Volume (Veh/h)	7	1	2	9	1	5	4	273	4	5	90	5
Sign Control	Stop			Stop			Free			Free		
Grade	0%			0%			0%			0%		
Peak Hour Factor	0.83	0.83	0.83	0.67	0.25	0.75	0.93	0.93	0.93	0.84	0.84	0.84
Hourly flow rate (vph)	8	1	2	13	4	7	4	294	4	6	107	6
Pedestrians	6			2			6			5		
Lane Width (ft)	11.0			11.0			12.0			11.0		
Walking Speed (ft/s)	3.5			3.5			3.5			3.5		
Percent Blockage	1			0			1			0		
Right turn flare (veh)												
Median type							None			None		
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	446	436	122	436	437	303	119				300	
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	446	436	122	436	437	303	119				300	
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.3				4.1	
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.4				2.2	
p0 queue free %	98	100	100	98	99	99	100				100	
cM capacity (veh/h)	507	509	924	522	509	737	1331				1270	
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	11	24	302	119								
Volume Left	8	13	4	6								
Volume Right	2	7	4	6								
cSH	553	568	1331	1270								
Volume to Capacity	0.02	0.04	0.00	0.00								
Queue Length 95th (ft)	2	3	0	0								
Control Delay (s)	11.6	11.6	0.1	0.4								
Lane LOS	B	B	A	A								
Approach Delay (s)	11.6	11.6	0.1	0.4								
Approach LOS	B	B										
Intersection Summary												
Average Delay				1.1								
Intersection Capacity Utilization				27.7%	ICU Level of Service				A			
Analysis Period (min)				15								



Lanes, Volumes, Timings  
9: Ryder St & South Dr










2020 Existing PM Peak Hour

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	9	1	5	4	0	5
Future Volume (vph)	9	1	5	4	0	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.984		0.937			
Flt Protected	0.958					
Satd. Flow (prot)	1791	0	1435	0	0	1402
Flt Permitted	0.958					
Satd. Flow (perm)	1791	0	1435	0	0	1402
Link Speed (mph)	25		25			25
Link Distance (ft)	269		157			797
Travel Time (s)	7.3		4.3			21.7
Confl. Peds. (#/hr)	6	5		6	5	
Confl. Bikes (#/hr)				1		
Peak Hour Factor	0.62	0.62	0.59	0.59	0.42	0.42
Heavy Vehicles (%)	0%	0%	0%	25%	0%	22%
Parking (#/hr)			0	0	0	0
Adj. Flow (vph)	15	2	8	7	0	12
Shared Lane Traffic (%)						
Lane Group Flow (vph)	17	0	15	0	0	12
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.14	1.00	1.00	1.14
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	16.7%			ICU Level of Service A		
Analysis Period (min)	15					



# HCM Unsignalized Intersection Capacity Analysis 9: Ryder St & South Dr

















2020 Existing PM Peak Hour

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	9	1	5	4	0	5
Future Volume (Veh/h)	9	1	5	4	0	5
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.62	0.62	0.59	0.59	0.42	0.42
Hourly flow rate (vph)	15	2	8	7	0	12
Pedestrians	6		6			5
Lane Width (ft)	12.0		12.0			12.0
Walking Speed (ft/s)	3.5		3.5			3.5
Percent Blockage	1		1			0
Right turn flare (veh)						
Median type			None			None
Median storage veh						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	36	22			21	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	36	22			21	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	98	100			100	
cM capacity (veh/h)	971	1049			1599	
Direction, Lane #	WB 1	NB 1	SB 1			
Volume Total	17	15	12			
Volume Left	15	0	0			
Volume Right	2	7	0			
cSH	980	1700	1599			
Volume to Capacity	0.02	0.01	0.00			
Queue Length 95th (ft)	1	0	0			
Control Delay (s)	8.7	0.0	0.0			
Lane LOS	A					
Approach Delay (s)	8.7	0.0	0.0			
Approach LOS	A					
Intersection Summary						
Average Delay			3.4			
Intersection Capacity Utilization			16.7%	ICU Level of Service		A
Analysis Period (min)			15			



Lanes, Volumes, Timings  
1: Appleton St & Appleton Pl & Massachusetts Ave

2025 No-Build AM Peak Hour

















												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	376	51	313	396	0	19	0	180	0	0	0
Future Volume (vph)	0	376	51	313	396	0	19	0	180	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	14	14	14	14	14	14	12	12	12	12	12	12
Grade (%)		0%			0%			-4%			0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.984						0.878				
Flt Protected					0.978			0.995				
Satd. Flow (prot)	0	1581	0	0	1648	0	0	1678	0	0	1863	0
Flt Permitted					0.978			0.995				
Satd. Flow (perm)	0	1581	0	0	1648	0	0	1678	0	0	1863	0
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		330			357			73			97	
Travel Time (s)		9.0			9.7			2.0			2.6	
Confl. Peds. (#/hr)	109		11	118		215	11		118	215		109
Confl. Bikes (#/hr)			2			1						
Peak Hour Factor	0.75	0.75	0.75	0.84	0.84	0.84	0.85	0.85	0.85	0.92	0.92	0.92
Heavy Vehicles (%)	0%	11%	2%	2%	7%	0%	0%	0%	1%	2%	2%	2%
Bus Blockages (#/hr)	8	8	8	8	8	8	0	0	0	0	0	0
Parking (#/hr)	0	0	0	0	0	0						
Adj. Flow (vph)	0	501	68	373	471	0	22	0	212	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	569	0	0	844	0	0	234	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.92	1.10	0.92	0.92	1.10	0.92	0.97	0.97	0.97	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization	89.3%											
Analysis Period (min)	15											
ICU Level of Service E												



# HCM Unsignalized Intersection Capacity Analysis

## 1: Appleton St & Appleton Pl & Massachusetts Ave










2025 No-Build AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	376	51	313	396	0	19	0	180	0	0	0
Future Volume (Veh/h)	0	376	51	313	396	0	19	0	180	0	0	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			-4%			0%	
Peak Hour Factor	0.75	0.75	0.75	0.84	0.84	0.84	0.85	0.85	0.85	0.92	0.92	0.92
Hourly flow rate (vph)	0	501	68	373	471	0	22	0	212	0	0	0
Pedestrians		109			215			118			215	
Lane Width (ft)		14.0			14.0			12.0			12.0	
Walking Speed (ft/s)		3.5			3.5			3.5			3.5	
Percent Blockage		12			24			11			20	
Right turn flare (veh)												
Median type	None			None								
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	686			687			1979	2085	868	2394	2119	795
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	686			687			1979	2085	868	2394	2119	795
tC, single (s)	4.1			4.1			*4.0	6.5	*3.0	*3.0	*3.0	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			*3.0	4.0	*3.0	3.5	*3.0	3.3
p0 queue free %	100			54			79	100	62	100	100	100
cM capacity (veh/h)	729			805			107	20	553	68	166	271
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	569	844	234	0								
Volume Left	0	373	22	0								
Volume Right	68	0	212	0								
cSH	729	805	397	1700								
Volume to Capacity	0.00	0.46	0.59	0.01								
Queue Length 95th (ft)	0	62	91	0								
Control Delay (s)	0.0	10.6	26.3	0.0								
Lane LOS		B	D	A								
Approach Delay (s)	0.0	10.6	26.3	0.0								
Approach LOS			D	A								
Intersection Summary												
Average Delay			9.2									
Intersection Capacity Utilization			89.3%	ICU Level of Service					E			
Analysis Period (min)			15									
* User Entered Value												



Lanes, Volumes, Timings  
2: Appleton St & Appleton Pl










2025 No-Build AM Peak Hour

						
Lane Group	WBL	WBR	SBL	SBR	NEL	NER
Lane Configurations						
Traffic Volume (vph)	39	32	29	335	167	9
Future Volume (vph)	39	32	29	335	167	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	12	12	12	12
Grade (%)	-4%		0%		-4%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.939		0.876		0.993	
Flt Protected	0.973		0.996		0.955	
Satd. Flow (prot)	1657	0	1628	0	1639	0
Flt Permitted	0.973		0.996		0.955	
Satd. Flow (perm)	1657	0	1628	0	1639	0
Link Speed (mph)	25		25		25	
Link Distance (ft)	178		73		363	
Travel Time (s)	4.9		2.0		9.9	
Confl. Peds. (#/hr)	109	91	91	18	18	109
Confl. Bikes (#/hr)						4
Peak Hour Factor	0.38	0.38	0.84	0.84	0.85	0.85
Heavy Vehicles (%)	6%	0%	0%	2%	1%	0%
Parking (#/hr)					0	0
Adj. Flow (vph)	103	84	35	399	196	11
Shared Lane Traffic (%)						
Lane Group Flow (vph)	187	0	434	0	207	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Right
Median Width(ft)	11		12		12	
Link Offset(ft)	0		0		0	
Crosswalk Width(ft)	16		16		16	
Two way Left Turn Lane						
Headway Factor	1.02	1.02	1.00	1.00	1.12	0.97
Turning Speed (mph)	15	9	15	9	15	9
Sign Control	Stop		Free		Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	60.2%			ICU Level of Service B		
Analysis Period (min)	15					



# HCM Unsignalized Intersection Capacity Analysis 2: Appleton St & Appleton Pl

















2025 No-Build AM Peak Hour

						
Movement	WBL	WBR	SBL	SBR	NEL	NER
Lane Configurations						
Traffic Volume (veh/h)	39	32	29	335	167	9
Future Volume (Veh/h)	39	32	29	335	167	9
Sign Control	Stop		Free		Stop	
Grade	-4%		0%		-4%	
Peak Hour Factor	0.38	0.38	0.84	0.84	0.85	0.85
Hourly flow rate (vph)	103	84	35	399	196	11
Pedestrians	109		91		109	
Lane Width (ft)	11.0		12.0		12.0	
Walking Speed (ft/s)	3.5		3.5		3.5	
Percent Blockage	10		9		10	
Right turn flare (veh)						
Median type			None			
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	687	200	109		605	488
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	687	200	109		605	488
tC, single (s)	*5.0	*5.0	4.1		*5.0	*5.0
tC, 2 stage (s)						
tF (s)	*3.0	*3.0	2.2		*3.0	*3.0
p0 queue free %	79	90	97		43	98
cM capacity (veh/h)	479	816	1352		341	586
Direction, Lane #	WB 1	SB 1	NE 1			
Volume Total	187	434	207			
Volume Left	0	35	196			
Volume Right	84	399	0			
cSH	588	1352	349			
Volume to Capacity	0.32	0.03	0.59			
Queue Length 95th (ft)	34	2	91			
Control Delay (s)	13.9	0.9	29.3			
Lane LOS	B	A	D			
Approach Delay (s)	13.9	0.9	29.3			
Approach LOS	B		D			
Intersection Summary						
Average Delay		10.9				
Intersection Capacity Utilization		60.2%		ICU Level of Service		B
Analysis Period (min)		15				
* User Entered Value						



Lanes, Volumes, Timings  
3: Burton St/Forest St & Massachusetts Ave

2025 No-Build AM Peak Hour

















												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	100	456	1	10	491	108	0	10	21	72	24	214
Future Volume (vph)	100	456	1	10	491	108	0	10	21	72	24	214
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	14	14	14	12	12	12	12	12	12	12	12	12
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt					0.976			0.909			0.907	
Flt Protected		0.991			0.999						0.988	
Satd. Flow (prot)	0	1675	0	0	1764	0	0	1554	0	0	1668	0
Flt Permitted		0.991			0.999						0.988	
Satd. Flow (perm)	0	1675	0	0	1764	0	0	1554	0	0	1668	0
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		357			87			283			336	
Travel Time (s)		9.7			2.4			7.7			9.2	
Confl. Peds. (#/hr)	57		56	8		9	56		8	9		57
Confl. Bikes (#/hr)			4			1						
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.44	0.44	0.44	0.89	0.89	0.89
Heavy Vehicles (%)	3%	9%	0%	0%	6%	1%	0%	0%	0%	3%	0%	2%
Parking (#/hr)	0	0	0				0	0	0			
Adj. Flow (vph)	115	524	1	11	564	124	0	23	48	81	27	240
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	640	0	0	699	0	0	71	0	0	348	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.92	1.05	0.92	1.00	1.00	1.00	1.00	1.14	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization	100.8%						ICU Level of Service G					
Analysis Period (min)	15											



# HCM Unsignalized Intersection Capacity Analysis

## 3: Burton St/Forest St & Massachusetts Ave

2025 No-Build AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	100	456	1	10	491	108	0	10	21	72	24	214
Future Volume (Veh/h)	100	456	1	10	491	108	0	10	21	72	24	214
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.44	0.44	0.44	0.89	0.89	0.89
Hourly flow rate (vph)	115	524	1	11	564	124	0	23	48	81	27	240
Pedestrians		57			9			56			57	
Lane Width (ft)		14.0			12.0			12.0			12.0	
Walking Speed (ft/s)		3.5			3.5			3.5			3.5	
Percent Blockage		6			1			5			5	
Right turn flare (veh)												
Median type		None			None							
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	745			581			1769	1578	590	1528	1516	740
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	745			581			1769	1578	590	1528	1516	740
tC, single (s)	4.1			4.1			7.1	*5.0	*5.0	*5.0	*5.0	*5.0
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	*3.0	*3.0	*3.0	*3.0	*3.0
p0 queue free %	86			99			100	87	92	50	86	53
cM capacity (veh/h)	812			950			23	183	629	163	195	510
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	640	699	71	348								
Volume Left	115	11	0	81								
Volume Right	1	124	48	240								
cSH	812	950	352	314								
Volume to Capacity	0.14	0.01	0.20	1.11								
Queue Length 95th (ft)	12	1	19	343								
Control Delay (s)	3.5	0.3	17.8	119.7								
Lane LOS	A	A	C	F								
Approach Delay (s)	3.5	0.3	17.8	119.7								
Approach LOS			C	F								
Intersection Summary												
Average Delay		25.8										
Intersection Capacity Utilization		100.8%		ICU Level of Service				G				
Analysis Period (min)		15										
* User Entered Value												



Lanes, Volumes, Timings  
4: Massachusetts Ave & West Dr

2025 No-Build AM Peak Hour



Lane Group	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations		↰	↱		↰	↱
Traffic Volume (vph)	22	527	608	6	1	1
Future Volume (vph)	22	527	608	6	1	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	14	14	10	10
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt			0.999		0.932	
Flt Protected		0.998			0.976	
Satd. Flow (prot)	0	1585	1720	0	1613	0
Flt Permitted		0.998			0.976	
Satd. Flow (perm)	0	1585	1720	0	1613	0
Link Speed (mph)		25	25		25	
Link Distance (ft)		87	240		169	
Travel Time (s)		2.4	6.5		4.6	
Confl. Peds. (#/hr)	8			8	8	8
Confl. Bikes (#/hr)				1		
Peak Hour Factor	0.87	0.87	0.87	0.87	0.25	0.25
Heavy Vehicles (%)	0%	8%	6%	1%	0%	0%
Parking (#/hr)	0	0	0	0		
Adj. Flow (vph)	25	606	699	7	4	4
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	631	706	0	8	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		10	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.14	1.05	0.92	1.09	1.09
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

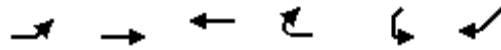
Intersection Capacity Utilization 57.9% ICU Level of Service B




Analysis Period (min) 15



# HCM Unsignalized Intersection Capacity Analysis 4: Massachusetts Ave & West Dr

2025 No-Build AM Peak Hour



Movement	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations						
Traffic Volume (veh/h)	22	527	608	6	1	1
Future Volume (Veh/h)	22	527	608	6	1	1
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.87	0.87	0.87	0.87	0.25	0.25
Hourly flow rate (vph)	25	606	699	7	4	4
Pedestrians		8	8		8	
Lane Width (ft)		12.0	14.0		10.0	
Walking Speed (ft/s)		3.5	3.5		3.5	
Percent Blockage		1	1		1	
Right turn flare (veh)						
Median type		None	None			
Median storage veh						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	714				1374	718
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	714				1374	718
tC, single (s)	4.1				*5.0	*5.0
tC, 2 stage (s)						
tF (s)	2.2				*5.0	*5.0
p0 queue free %	97				98	99
cM capacity (veh/h)	890				229	414
Direction, Lane #	EB 1	WB 1	SW 1			
Volume Total	631	706	8			
Volume Left	25	0	4			
Volume Right	0	7	4			
cSH	890	1700	295			
Volume to Capacity	0.03	0.42	0.03			
Queue Length 95th (ft)	2	0	2			
Control Delay (s)	0.7	0.0	17.6			
Lane LOS	A		C			
Approach Delay (s)	0.7	0.0	17.6			
Approach LOS			C			
Intersection Summary						
Average Delay			0.5			
Intersection Capacity Utilization			57.9%	ICU Level of Service		B
Analysis Period (min)			15			

\* User Entered Value



Lanes, Volumes, Timings  
5: Pine Ct & Massachusetts Ave

2025 No-Build AM Peak Hour

	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↰			↱	↗	↘
Traffic Volume (vph)	534	2	0	610	1	8
Future Volume (vph)	534	2	0	610	1	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	14	14	14	14	12	12
Grade (%)	0%			0%	-4%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt					0.880	
Flt Protected					0.994	
Satd. Flow (prot)	1506	0	0	1563	1526	0
Flt Permitted					0.994	
Satd. Flow (perm)	1506	0	0	1563	1526	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	240			134	415	
Travel Time (s)	6.5			3.7	11.3	
Confl. Peds. (#/hr)		10	10		10	10
Confl. Bikes (#/hr)		3				
Peak Hour Factor	0.85	0.85	0.88	0.88	0.50	0.50
Heavy Vehicles (%)	9%	0%	0%	5%	0%	0%
Parking (#/hr)	0	0	0	0		
Adj. Flow (vph)	628	2	0	693	2	16
Shared Lane Traffic (%)						
Lane Group Flow (vph)	630	0	0	693	18	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.20	1.05	1.05	1.20	1.12	1.12
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	CBD					
Control Type:	Unsignalized					
Intersection Capacity Utilization	48.5%			ICU Level of Service A		
Analysis Period (min)	15					



# HCM Unsignalized Intersection Capacity Analysis 5: Pine Ct & Massachusetts Ave










2025 No-Build AM Peak Hour

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↱			↰	↰	
Traffic Volume (veh/h)	534	2	0	610	1	8
Future Volume (Veh/h)	534	2	0	610	1	8
Sign Control	Free			Free	Stop	
Grade	0%			0%	-4%	
Peak Hour Factor	0.85	0.85	0.88	0.88	0.50	0.50
Hourly flow rate (vph)	628	2	0	693	2	16
Pedestrians	10			10	10	
Lane Width (ft)	14.0			14.0	12.0	
Walking Speed (ft/s)	3.5			3.5	3.5	
Percent Blockage	1			1	1	
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			640		1342	649
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			640		1342	649
tC, single (s)			4.1		*5.0	*5.0
tC, 2 stage (s)						
tF (s)			2.2		*3.0	*3.0
p0 queue free %			100		99	97
cM capacity (veh/h)			945		303	618
Direction, Lane #	EB 1	WB 1	NB 1			
Volume Total	630	693	18			
Volume Left	0	0	2			
Volume Right	2	0	16			
cSH	1700	945	554			
Volume to Capacity	0.37	0.00	0.03			
Queue Length 95th (ft)	0	0	3			
Control Delay (s)	0.0	0.0	11.7			
Lane LOS			B			
Approach Delay (s)	0.0	0.0	11.7			
Approach LOS			B			
Intersection Summary						
Average Delay			0.2			
Intersection Capacity Utilization			48.5%	ICU Level of Service		A
Analysis Period (min)			15			
* User Entered Value						



Lanes, Volumes, Timings  
6: Massachusetts Ave & Quinn Rd










2025 No-Build AM Peak Hour

						
Lane Group	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Traffic Volume (vph)	28	513	603	10	3	7
Future Volume (vph)	28	513	603	10	3	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	14	14	14	14
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt			0.998		0.907	
Flt Protected		0.997			0.985	
Satd. Flow (prot)	0	1757	1677	0	1652	0
Flt Permitted		0.997			0.985	
Satd. Flow (perm)	0	1757	1677	0	1652	0
Link Speed (mph)		25	25		25	
Link Distance (ft)		134	384		203	
Travel Time (s)		3.7	10.5		5.5	
Confl. Peds. (#/hr)	10			10	10	10
Confl. Bikes (#/hr)				3		
Peak Hour Factor	0.85	0.85	0.88	0.88	0.62	0.62
Heavy Vehicles (%)	4%	8%	5%	0%	0%	14%
Parking (#/hr)			6	0		
Adj. Flow (vph)	33	604	685	11	5	11
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	637	696	0	16	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		14	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.10	0.92	0.92	0.92
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	62.7%			ICU Level of Service B		
Analysis Period (min)	15					



# HCM Unsignalized Intersection Capacity Analysis 6: Massachusetts Ave & Quinn Rd










2025 No-Build AM Peak Hour

						
Movement	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Traffic Volume (veh/h)	28	513	603	10	3	7
Future Volume (Veh/h)	28	513	603	10	3	7
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.85	0.85	0.88	0.88	0.62	0.62
Hourly flow rate (vph)	33	604	685	11	5	11
Pedestrians		10	10		10	
Lane Width (ft)		12.0	14.0		14.0	
Walking Speed (ft/s)		3.5	3.5		3.5	
Percent Blockage		1	1		1	
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	706				1380	710
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	706				1380	710
tC, single (s)	4.1				*5.0	*5.0
tC, 2 stage (s)						
tF (s)	2.2				*3.0	*3.0
p0 queue free %	96				98	98
cM capacity (veh/h)	873				279	581
Direction, Lane #	SE 1	NW 1	SW 1			
Volume Total	637	696	16			
Volume Left	33	0	5			
Volume Right	0	11	11			
cSH	873	1700	434			
Volume to Capacity	0.04	0.41	0.04			
Queue Length 95th (ft)	3	0	3			
Control Delay (s)	1.0	0.0	13.6			
Lane LOS	A		B			
Approach Delay (s)	1.0	0.0	13.6			
Approach LOS			B			
<b>Intersection Summary</b>						
Average Delay			0.6			
Intersection Capacity Utilization			62.7%	ICU Level of Service		B
Analysis Period (min)			15			
* User Entered Value						



Lanes, Volumes, Timings  
7: West Dr/Mill Brook Br & Quinn Access Rd

2025 No-Build AM Peak Hour










						
Lane Group	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Volume (vph)	2	1	18	8	5	2
Future Volume (vph)	2	1	18	8	5	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	9	9
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.966		0.959			
Flt Protected	0.964					0.966
Satd. Flow (prot)	1592	0	1822	0	0	1449
Flt Permitted	0.964					0.966
Satd. Flow (perm)	1592	0	1822	0	0	1449
Link Speed (mph)	25		25			25
Link Distance (ft)	315		169			187
Travel Time (s)	8.6		4.6			5.1
Peak Hour Factor	0.75	0.75	0.61	0.61	0.35	0.35
Heavy Vehicles (%)	0%	0%	0%	0%	20%	0%
Parking (#/hr)	0	0				
Adj. Flow (vph)	3	1	30	13	14	6
Shared Lane Traffic (%)						
Lane Group Flow (vph)	4	0	43	0	0	20
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.14	1.00	1.00	1.00	1.14	1.14
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	14.5%			ICU Level of Service A		
Analysis Period (min)	15					



# HCM Unsignalized Intersection Capacity Analysis

## 7: West Dr/Mill Brook Br & Quinn Access Rd

















2025 No-Build AM Peak Hour

						
Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Volume (veh/h)	2	1	18	8	5	2
Future Volume (Veh/h)	2	1	18	8	5	2
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.75	0.75	0.61	0.61	0.35	0.35
Hourly flow rate (vph)	3	1	30	13	14	6
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	70	36			43	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	70	36			43	
tC, single (s)	6.4	6.2			4.3	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.4	
p0 queue free %	100	100			99	
cM capacity (veh/h)	930	1042			1457	
Direction, Lane #	NW 1	NE 1	SW 1			
Volume Total	4	43	20			
Volume Left	3	0	14			
Volume Right	1	13	0			
cSH	955	1700	1457			
Volume to Capacity	0.00	0.03	0.01			
Queue Length 95th (ft)	0	0	1			
Control Delay (s)	8.8	0.0	5.3			
Lane LOS	A		A			
Approach Delay (s)	8.8	0.0	5.3			
Approach LOS	A					
Intersection Summary						
Average Delay			2.1			
Intersection Capacity Utilization			14.5%	ICU Level of Service		A
Analysis Period (min)			15			



Lanes, Volumes, Timings  
8: Forest St & Peirce St/Ryder St

















2025 No-Build AM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	11	0	1	9	0	3	3	189	10	11	297	69
Future Volume (vph)	11	0	1	9	0	3	3	189	10	11	297	69
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	12	12	12	11	11	11
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.988			0.968			0.993			0.975	
Flt Protected		0.957			0.963			0.999			0.999	
Satd. Flow (prot)	0	1737	0	0	1437	0	0	1828	0	0	1769	0
Flt Permitted		0.957			0.963			0.999			0.999	
Satd. Flow (perm)	0	1737	0	0	1437	0	0	1828	0	0	1769	0
Link Speed (mph)		25			25			20			25	
Link Distance (ft)		451			157			336			396	
Travel Time (s)		12.3			4.3			11.5			10.8	
Confl. Peds. (#/hr)	10		13	3			13		3			10
Peak Hour Factor	0.55	0.55	0.55	0.69	0.69	0.69	0.82	0.82	0.82	0.86	0.86	0.86
Heavy Vehicles (%)	0%	0%	0%	25%	0%	0%	33%	1%	33%	0%	1%	2%
Adj. Flow (vph)	20	0	2	13	0	4	4	230	12	13	345	80
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	22	0	0	17	0	0	246	0	0	438	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.04	1.04	1.04	1.04	1.04	1.04	1.00	1.00	1.00	1.04	1.04	1.04
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization	39.9%											
Analysis Period (min)	15											
ICU Level of Service A												



# HCM Unsignalized Intersection Capacity Analysis 8: Forest St & Peirce St/Ryder St










2025 No-Build AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	11	0	1	9	0	3	3	189	10	11	297	69
Future Volume (Veh/h)	11	0	1	9	0	3	3	189	10	11	297	69
Sign Control	Stop			Stop			Free			Free		
Grade	0%			0%			0%			0%		
Peak Hour Factor	0.55	0.55	0.55	0.69	0.69	0.69	0.82	0.82	0.82	0.86	0.86	0.86
Hourly flow rate (vph)	20	0	2	13	0	4	4	230	12	13	345	80
Pedestrians	13			3			13			10		
Lane Width (ft)	11.0			11.0			12.0			11.0		
Walking Speed (ft/s)	3.5			3.5			3.5			3.5		
Percent Blockage	1			0			1			1		
Right turn flare (veh)												
Median type							None			None		
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	682	677	411	673	711	249	438				245	
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	682	677	411	673	711	249	438				245	
tC, single (s)	7.1	6.5	6.2	7.3	6.5	6.2	4.4				4.1	
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.7	4.0	3.3	2.5				2.2	
p0 queue free %	94	100	100	96	100	99	100				99	
cM capacity (veh/h)	350	367	630	326	351	786	964				1329	
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	22	17	246	438								
Volume Left	20	13	4	13								
Volume Right	2	4	12	80								
cSH	365	378	964	1329								
Volume to Capacity	0.06	0.04	0.00	0.01								
Queue Length 95th (ft)	5	4	0	1								
Control Delay (s)	15.5	15.0	0.2	0.3								
Lane LOS	C	B	A	A								
Approach Delay (s)	15.5	15.0	0.2	0.3								
Approach LOS	C	B										
Intersection Summary												
Average Delay				1.1								
Intersection Capacity Utilization				39.9%	ICU Level of Service				A			
Analysis Period (min)				15								



Lanes, Volumes, Timings  
9: Ryder St & South Dr










2025 No-Build AM Peak Hour

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	2	1	8	13	4	10
Future Volume (vph)	2	1	8	13	4	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.949		0.916			
Flt Protected	0.970					0.986
Satd. Flow (prot)	1749	0	1420	0	0	1459
Flt Permitted	0.970					0.986
Satd. Flow (perm)	1749	0	1420	0	0	1459
Link Speed (mph)	25		25			25
Link Distance (ft)	269		157			797
Travel Time (s)	7.3		4.3			21.7
Confl. Peds. (#/hr)	32	32		32	32	
Confl. Bikes (#/hr)				2		
Peak Hour Factor	0.38	0.38	0.71	0.71	0.81	0.81
Heavy Vehicles (%)	0%	0%	14%	8%	0%	22%
Parking (#/hr)			0	0	0	0
Adj. Flow (vph)	5	3	11	18	5	12
Shared Lane Traffic (%)						
Lane Group Flow (vph)	8	0	29	0	0	17
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.14	1.00	1.00	1.14
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	26.5%			ICU Level of Service A		
Analysis Period (min)	15					



# HCM Unsignalized Intersection Capacity Analysis 9: Ryder St & South Dr

















2025 No-Build AM Peak Hour

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	2	1	8	13	4	10
Future Volume (Veh/h)	2	1	8	13	4	10
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.38	0.38	0.71	0.71	0.81	0.81
Hourly flow rate (vph)	5	3	11	18	5	12
Pedestrians	32		32			32
Lane Width (ft)	12.0		12.0			12.0
Walking Speed (ft/s)	3.5		3.5			3.5
Percent Blockage	3		3			3
Right turn flare (veh)						
Median type			None			None
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	106	84			61	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	106	84			61	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	99	100			100	
cM capacity (veh/h)	840	922			1508	
Direction, Lane #	WB 1	NB 1	SB 1			
Volume Total	8	29	17			
Volume Left	5	0	5			
Volume Right	3	18	0			
cSH	869	1700	1508			
Volume to Capacity	0.01	0.02	0.00			
Queue Length 95th (ft)	1	0	0			
Control Delay (s)	9.2	0.0	2.2			
Lane LOS	A		A			
Approach Delay (s)	9.2	0.0	2.2			
Approach LOS	A					
Intersection Summary						
Average Delay			2.1			
Intersection Capacity Utilization			26.5%	ICU Level of Service		A
Analysis Period (min)			15			



Lanes, Volumes, Timings  
1: Appleton St & Appleton Pl & Massachusetts Ave

2025 No-Build PM Peak Hour

















												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	3	467	20	126	351	2	20	1	364	1	1	3
Future Volume (vph)	3	467	20	126	351	2	20	1	364	1	1	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	14	14	14	14	14	14	12	12	12	12	12	12
Grade (%)		0%			0%			-4%			0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.994						0.872			0.925	
Flt Protected					0.987			0.997			0.989	
Satd. Flow (prot)	0	1722	0	0	1701	0	0	1669	0	0	1738	0
Flt Permitted					0.987			0.997			0.989	
Satd. Flow (perm)	0	1722	0	0	1701	0	0	1669	0	0	1738	0
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		330			357			73			97	
Travel Time (s)		9.0			9.7			2.0			2.6	
Confl. Peds. (#/hr)	21		1	7		27	1		7	27		21
Confl. Bikes (#/hr)			2			2						
Peak Hour Factor	0.93	0.93	0.93	0.88	0.88	0.88	0.90	0.90	0.90	0.62	0.62	0.62
Heavy Vehicles (%)	0%	2%	0%	1%	3%	0%	0%	0%	1%	0%	0%	0%
Bus Blockages (#/hr)	8	8	8	8	8	8	0	0	0	0	0	0
Parking (#/hr)	0	0	0	0	0	0						
Adj. Flow (vph)	3	502	22	143	399	2	22	1	404	2	2	5
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	527	0	0	544	0	0	427	0	0	9	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.92	1.10	0.92	0.92	1.10	0.92	0.97	0.97	0.97	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization	87.5%						ICU Level of Service E					
Analysis Period (min)	15											



# HCM Unsignalized Intersection Capacity Analysis

## 1: Appleton St & Appleton Pl & Massachusetts Ave










2025 No-Build PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	3	467	20	126	351	2	20	1	364	1	1	3
Future Volume (Veh/h)	3	467	20	126	351	2	20	1	364	1	1	3
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			-4%			0%	
Peak Hour Factor	0.93	0.93	0.93	0.88	0.88	0.88	0.90	0.90	0.90	0.62	0.62	0.62
Hourly flow rate (vph)	3	502	22	143	399	2	22	1	404	2	2	5
Pedestrians		21			27			7			27	
Lane Width (ft)		14.0			14.0			12.0			12.0	
Walking Speed (ft/s)		3.5			3.5			3.5			3.5	
Percent Blockage		2			3			1			3	
Right turn flare (veh)												
Median type		None			None							
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	428			531			1239	1240	547	1664	1250	448
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	428			531			1239	1240	547	1664	1250	448
tC, single (s)	4.1			4.1			*5.0	*5.0	*5.0	*5.0	*5.0	*5.0
tC, 2 stage (s)												
tF (s)	2.2			2.2			*3.0	*3.0	*3.0	*3.0	*3.0	*3.0
p0 queue free %	100			86			92	100	40	97	99	99
cM capacity (veh/h)	1113			1035			287	286	673	72	283	734
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	527	544	427	9								
Volume Left	3	143	22	2								
Volume Right	22	2	404	5								
cSH	1113	1035	628	217								
Volume to Capacity	0.00	0.14	0.68	0.04								
Queue Length 95th (ft)	0	12	132	3								
Control Delay (s)	0.1	3.6	22.0	22.3								
Lane LOS	A	A	C	C								
Approach Delay (s)	0.1	3.6	22.0	22.3								
Approach LOS			C	C								
Intersection Summary												
Average Delay			7.7									
Intersection Capacity Utilization			87.5%	ICU Level of Service					E			
Analysis Period (min)			15									
* User Entered Value												



Lanes, Volumes, Timings  
2: Appleton St & Appleton Pl










2025 No-Build PM Peak Hour

						
Lane Group	WBL	WBR	SBL	SBR	NEL	NER
Lane Configurations						
Traffic Volume (vph)	3	25	11	136	360	6
Future Volume (vph)	3	25	11	136	360	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	12	12	12	12
Grade (%)	-4%		0%		-4%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.881		0.875		0.998	
Flt Protected	0.994		0.996		0.953	
Satd. Flow (prot)	1641	0	1626	0	1643	0
Flt Permitted	0.994		0.996		0.953	
Satd. Flow (perm)	1641	0	1626	0	1643	0
Link Speed (mph)	25		25		25	
Link Distance (ft)	178		73		363	
Travel Time (s)	4.9		2.0		9.9	
Confl. Peds. (#/hr)	20	18	9	11	11	20
Peak Hour Factor	0.65	0.65	0.84	0.84	0.90	0.90
Heavy Vehicles (%)	0%	0%	0%	2%	1%	0%
Parking (#/hr)					0	0
Adj. Flow (vph)	5	38	13	162	400	7
Shared Lane Traffic (%)						
Lane Group Flow (vph)	43	0	175	0	407	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Right
Median Width(ft)	11		12		12	
Link Offset(ft)	0		0		0	
Crosswalk Width(ft)	16		16		16	
Two way Left Turn Lane						
Headway Factor	1.02	1.02	1.00	1.00	1.12	0.97
Turning Speed (mph)	15	9	15	9	15	9
Sign Control	Stop		Free		Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	49.3%			ICU Level of Service A		
Analysis Period (min)	15					



# HCM Unsignalized Intersection Capacity Analysis 2: Appleton St & Appleton Pl

















2025 No-Build PM Peak Hour

						
Movement	WBL	WBR	SBL	SBR	NEL	NER
Lane Configurations						
Traffic Volume (veh/h)	3	25	11	136	360	6
Future Volume (Veh/h)	3	25	11	136	360	6
Sign Control	Stop		Free		Stop	
Grade	-4%		0%		-4%	
Peak Hour Factor	0.65	0.65	0.84	0.84	0.90	0.90
Hourly flow rate (vph)	5	38	13	162	400	7
Pedestrians	20		18		20	
Lane Width (ft)	11.0		12.0		12.0	
Walking Speed (ft/s)	3.5		3.5		3.5	
Percent Blockage	2		2		2	
Right turn flare (veh)						
Median type			None			
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	228	38	20		186	147
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	228	38	20		186	147
tC, single (s)	*5.0	*5.0	4.1		*5.0	*5.0
tC, 2 stage (s)						
tF (s)	*3.0	*3.0	2.2		*3.0	*3.0
p0 queue free %	99	97	99		55	99
cM capacity (veh/h)	918	1117	1581		897	994
Direction, Lane #	WB 1	SB 1	NE 1			
Volume Total	43	175	407			
Volume Left	0	13	400			
Volume Right	38	162	0			
cSH	1089	1581	899			
Volume to Capacity	0.04	0.01	0.45			
Queue Length 95th (ft)	3	1	60			
Control Delay (s)	8.4	0.6	12.3			
Lane LOS	A	A	B			
Approach Delay (s)	8.4	0.6	12.3			
Approach LOS	A		B			
Intersection Summary						
Average Delay			8.7			
Intersection Capacity Utilization			49.3%	ICU Level of Service		A
Analysis Period (min)			15			
* User Entered Value						



Lanes, Volumes, Timings  
3: Burton St/Forest St & Massachusetts Ave

2025 No-Build PM Peak Hour

















												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	221	619	2	3	412	100	1	3	9	42	4	72
Future Volume (vph)	221	619	2	3	412	100	1	3	9	42	4	72
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	14	14	14	12	12	12	12	12	12	12	12	12
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt					0.974			0.908			0.918	
Flt Protected		0.987						0.995			0.983	
Satd. Flow (prot)	0	1676	0	0	1800	0	0	1545	0	0	1715	0
Flt Permitted		0.987						0.995			0.983	
Satd. Flow (perm)	0	1676	0	0	1800	0	0	1545	0	0	1715	0
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		357			87			283			336	
Travel Time (s)		9.7			2.4			7.7			9.2	
Confl. Peds. (#/hr)	19		21			2	19		14	16		21
Confl. Bikes (#/hr)			2			3						1
Peak Hour Factor	0.93	0.93	0.93	0.88	0.88	0.88	0.60	0.60	0.60	0.81	0.81	0.81
Heavy Vehicles (%)	3%	9%	0%	0%	3%	2%	0%	0%	0%	0%	0%	0%
Parking (#/hr)	0	0	0				0	0	0			
Adj. Flow (vph)	238	666	2	3	468	114	2	5	15	52	5	89
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	906	0	0	585	0	0	22	0	0	146	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.92	1.05	0.92	1.00	1.00	1.00	1.00	1.14	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization 97.7%	ICU Level of Service F											
Analysis Period (min) 15												



# HCM Unsignalized Intersection Capacity Analysis

## 3: Burton St/Forest St & Massachusetts Ave

2025 No-Build PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	221	619	2	3	412	100	1	3	9	42	4	72
Future Volume (Veh/h)	221	619	2	3	412	100	1	3	9	42	4	72
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.93	0.93	0.93	0.88	0.88	0.88	0.60	0.60	0.60	0.81	0.81	0.81
Hourly flow rate (vph)	238	666	2	3	468	114	2	5	15	52	5	89
Pedestrians		21			16			21			19	
Lane Width (ft)		14.0			12.0			12.0			12.0	
Walking Speed (ft/s)		3.5			3.5			3.5			3.5	
Percent Blockage		2			2			2			2	
Right turn flare (veh)												
Median type		None			None							
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	601			689			1808	1771	704	1726	1715	565
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	601			689			1808	1771	704	1726	1715	565
tC, single (s)	4.1			4.1			*5.0	*5.0	*5.0	*5.0	*5.0	*5.0
tC, 2 stage (s)												
tF (s)	2.2			2.2			*3.0	*3.0	*3.0	*3.0	*3.0	*3.0
p0 queue free %	75			100			98	96	97	65	97	86
cM capacity (veh/h)	954			896			119	141	576	148	150	658
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	906	585	22	146								
Volume Left	238	3	2	52								
Volume Right	2	114	15	89								
cSH	954	896	281	281								
Volume to Capacity	0.25	0.00	0.08	0.52								
Queue Length 95th (ft)	25	0	6	70								
Control Delay (s)	5.7	0.1	18.9	30.9								
Lane LOS	A	A	C	D								
Approach Delay (s)	5.7	0.1	18.9	30.9								
Approach LOS			C	D								
Intersection Summary												
Average Delay			6.1									
Intersection Capacity Utilization			97.7%		ICU Level of Service				F			
Analysis Period (min)			15									
* User Entered Value												



Lanes, Volumes, Timings  
4: Massachusetts Ave & West Dr

2025 No-Build PM Peak Hour



Lane Group	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations		↔	↔		↔	
Traffic Volume (vph)	6	664	498	2	6	17
Future Volume (vph)	6	664	498	2	6	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	14	14	10	10
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt					0.899	
Flt Protected					0.988	
Satd. Flow (prot)	0	1677	1771	0	1575	0
Flt Permitted					0.988	
Satd. Flow (perm)	0	1677	1771	0	1575	0
Link Speed (mph)		25	25		25	
Link Distance (ft)		87	240		169	
Travel Time (s)		2.4	6.5		4.6	
Confl. Peds. (#/hr)					19	19
Confl. Bikes (#/hr)				3		
Peak Hour Factor	0.93	0.93	0.88	0.88	0.64	0.64
Heavy Vehicles (%)	0%	2%	3%	0%	0%	0%
Parking (#/hr)	0	0	0	0		
Adj. Flow (vph)	6	714	566	2	9	27
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	720	568	0	36	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		10	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.14	1.05	0.92	1.09	1.09
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 54.4% ICU Level of Service A

Analysis Period (min) 15



# HCM Unsignalized Intersection Capacity Analysis 4: Massachusetts Ave & West Dr

2025 No-Build PM Peak Hour



Movement	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations						
Traffic Volume (veh/h)	6	664	498	2	6	17
Future Volume (Veh/h)	6	664	498	2	6	17
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.93	0.93	0.88	0.88	0.64	0.64
Hourly flow rate (vph)	6	714	566	2	9	27
Pedestrians		19	19			
Lane Width (ft)		12.0	14.0			
Walking Speed (ft/s)		3.5	3.5			
Percent Blockage		2	2			
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	568				1312	586
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	568				1312	586
tC, single (s)	4.1				*5.0	*5.0
tC, 2 stage (s)						
tF (s)	2.2				*3.0	*3.0
p0 queue free %	99				97	96
cM capacity (veh/h)	1014				310	660
Direction, Lane #	EB 1	WB 1	SW 1			
Volume Total	720	568	36			
Volume Left	6	0	9			
Volume Right	0	2	27			
cSH	1014	1700	515			
Volume to Capacity	0.01	0.33	0.07			
Queue Length 95th (ft)	0	0	6			
Control Delay (s)	0.2	0.0	12.5			
Lane LOS	A		B			
Approach Delay (s)	0.2	0.0	12.5			
Approach LOS			B			
Intersection Summary						
Average Delay			0.4			
Intersection Capacity Utilization			54.4%	ICU Level of Service		A
Analysis Period (min)			15			
* User Entered Value						



Lanes, Volumes, Timings  
5: Pine Ct & Massachusetts Ave










2025 No-Build PM Peak Hour

	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↰			↱	↗	
Traffic Volume (vph)	668	3	2	503	1	1
Future Volume (vph)	668	3	2	503	1	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	14	14	14	14	12	12
Grade (%)	0%			0%	-4%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.999				0.932	
Flt Protected					0.976	
Satd. Flow (prot)	1608	0	0	1641	1587	0
Flt Permitted					0.976	
Satd. Flow (perm)	1608	0	0	1641	1587	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	240			134	415	
Travel Time (s)	6.5			3.7	11.3	
Confl. Peds. (#/hr)		8	8		8	8
Confl. Bikes (#/hr)		1				
Peak Hour Factor	0.92	0.92	0.90	0.90	0.50	0.50
Heavy Vehicles (%)	2%	0%	3%	0%	0%	0%
Parking (#/hr)	0	0	0	0		
Adj. Flow (vph)	726	3	2	559	2	2
Shared Lane Traffic (%)						
Lane Group Flow (vph)	729	0	0	561	4	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.20	1.05	1.05	1.20	1.12	1.12
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	CBD					
Control Type:	Unsignalized					
Intersection Capacity Utilization	51.6%			ICU Level of Service A		
Analysis Period (min)	15					



# HCM Unsignalized Intersection Capacity Analysis 5: Pine Ct & Massachusetts Ave










2025 No-Build PM Peak Hour

						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	668	3	2	503	1	1
Future Volume (Veh/h)	668	3	2	503	1	1
Sign Control	Free			Free	Stop	
Grade	0%			0%	-4%	
Peak Hour Factor	0.92	0.92	0.90	0.90	0.50	0.50
Hourly flow rate (vph)	726	3	2	559	2	2
Pedestrians	8			8	8	
Lane Width (ft)	14.0			14.0	12.0	
Walking Speed (ft/s)	3.5			3.5	3.5	
Percent Blockage	1			1	1	
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			737	1306		744
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			737	1306		744
tC, single (s)			4.1	*5.0		*5.0
tC, 2 stage (s)						
tF (s)			2.2	*3.0		*3.0
p0 queue free %			100	99		100
cM capacity (veh/h)			858	315		564
Direction, Lane #	EB 1	WB 1	NB 1			
Volume Total	729	561	4			
Volume Left	0	2	2			
Volume Right	3	0	2			
cSH	1700	858	404			
Volume to Capacity	0.43	0.00	0.01			
Queue Length 95th (ft)	0	0	1			
Control Delay (s)	0.0	0.1	14.0			
Lane LOS			A B			
Approach Delay (s)	0.0	0.1	14.0			
Approach LOS			B			
Intersection Summary						
Average Delay			0.1			
Intersection Capacity Utilization			51.6%	ICU Level of Service		A
Analysis Period (min)			15			
* User Entered Value						



Lanes, Volumes, Timings  
6: Massachusetts Ave & Quinn Rd










2025 No-Build PM Peak Hour

						
Lane Group	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Traffic Volume (vph)	4	662	484	5	13	19
Future Volume (vph)	4	662	484	5	13	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	14	14	14	14
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt			0.999		0.920	
Flt Protected					0.980	
Satd. Flow (prot)	0	1863	1727	0	1775	0
Flt Permitted					0.980	
Satd. Flow (perm)	0	1863	1727	0	1775	0
Link Speed (mph)		25	25		25	
Link Distance (ft)		134	384		203	
Travel Time (s)		3.7	10.5		5.5	
Confl. Peds. (#/hr)	20			21	21	20
Confl. Bikes (#/hr)				7		
Peak Hour Factor	0.98	0.98	0.90	0.90	0.50	0.50
Heavy Vehicles (%)	0%	2%	2%	0%	0%	5%
Parking (#/hr)			6	0		
Adj. Flow (vph)	4	676	538	6	26	38
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	680	544	0	64	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		14	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.10	0.92	0.92	0.92
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	52.9%			ICU Level of Service A		
Analysis Period (min)	15					



# HCM Unsignalized Intersection Capacity Analysis 6: Massachusetts Ave & Quinn Rd










2025 No-Build PM Peak Hour

						
Movement	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Traffic Volume (veh/h)	4	662	484	5	13	19
Future Volume (Veh/h)	4	662	484	5	13	19
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.98	0.98	0.90	0.90	0.50	0.50
Hourly flow rate (vph)	4	676	538	6	26	38
Pedestrians		20	21		21	
Lane Width (ft)		12.0	14.0		14.0	
Walking Speed (ft/s)		3.5	3.5		3.5	
Percent Blockage		2	2		2	
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	565				1267	582
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	565				1267	582
tC, single (s)	4.1				*5.0	*5.0
tC, 2 stage (s)						
tF (s)	2.2				*3.0	*3.0
p0 queue free %	100				92	94
cM capacity (veh/h)	993				318	647
Direction, Lane #	SE 1	NW 1	SW 1			
Volume Total	680	544	64			
Volume Left	4	0	26			
Volume Right	0	6	38			
cSH	993	1700	455			
Volume to Capacity	0.00	0.32	0.14			
Queue Length 95th (ft)	0	0	12			
Control Delay (s)	0.1	0.0	14.2			
Lane LOS	A		B			
Approach Delay (s)	0.1	0.0	14.2			
Approach LOS			B			
Intersection Summary						
Average Delay		0.8				
Intersection Capacity Utilization		52.9%	ICU Level of Service	A		
Analysis Period (min)		15				
* User Entered Value						



Lanes, Volumes, Timings  
7: West Dr/Mill Brook Br & Quinn Access Rd










2025 No-Build PM Peak Hour

						
Lane Group	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Volume (vph)	7	0	2	4	0	14
Future Volume (vph)	7	0	2	4	0	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	9	9
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.905					
Flt Protected	0.950					
Satd. Flow (prot)	1624	0	1720	0	0	1693
Flt Permitted	0.950					
Satd. Flow (perm)	1624	0	1720	0	0	1693
Link Speed (mph)	25	25		25		
Link Distance (ft)	315	169		187		
Travel Time (s)	8.6	4.6		5.1		
Confl. Peds. (#/hr)	2	2	2		2	
Peak Hour Factor	0.58	0.58	0.58	0.58	0.50	0.50
Heavy Vehicles (%)	0%	0%	0%	0%	0%	1%
Parking (#/hr)	0	0				
Adj. Flow (vph)	12	0	3	7	0	28
Shared Lane Traffic (%)						
Lane Group Flow (vph)	12	0	10	0	0	28
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12	0		0		
Link Offset(ft)	0	0		0		
Crosswalk Width(ft)	16	16		16		
Two way Left Turn Lane						
Headway Factor	1.14	1.00	1.00	1.00	1.14	1.14
Turning Speed (mph)	15	9	9		15	
Sign Control	Stop	Free		Free		
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	14.6%			ICU Level of Service A		
Analysis Period (min)	15					



# HCM Unsignalized Intersection Capacity Analysis 7: West Dr/Mill Brook Br & Quinn Access Rd

















2025 No-Build PM Peak Hour

						
Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Volume (veh/h)	7	0	2	4	0	14
Future Volume (Veh/h)	7	0	2	4	0	14
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.58	0.58	0.58	0.58	0.50	0.50
Hourly flow rate (vph)	12	0	3	7	0	28
Pedestrians	2		2			2
Lane Width (ft)	12.0		12.0			9.0
Walking Speed (ft/s)	3.5		3.5			3.5
Percent Blockage	0		0			0
Right turn flare (veh)						
Median type			None			None
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	38	10			12	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	38	10			12	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	99	100			100	
cM capacity (veh/h)	975	1073			1617	
Direction, Lane #	NW 1	NE 1	SW 1			
Volume Total	12	10	28			
Volume Left	12	0	0			
Volume Right	0	7	0			
cSH	975	1700	1617			
Volume to Capacity	0.01	0.01	0.00			
Queue Length 95th (ft)	1	0	0			
Control Delay (s)	8.7	0.0	0.0			
Lane LOS	A					
Approach Delay (s)	8.7	0.0	0.0			
Approach LOS	A					
Intersection Summary						
Average Delay			2.1			
Intersection Capacity Utilization			14.6%	ICU Level of Service		A
Analysis Period (min)			15			



Lanes, Volumes, Timings  
8: Forest St & Peirce St/Ryder St

















2025 No-Build PM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	8	1	2	10	1	6	4	301	4	6	99	6
Future Volume (vph)	8	1	2	10	1	6	4	301	4	6	99	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	12	12	12	11	11	11
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.979			0.960			0.998			0.993	
Flt Protected		0.963			0.973			0.999			0.997	
Satd. Flow (prot)	0	1732	0	0	1716	0	0	1870	0	0	1818	0
Flt Permitted		0.963			0.973			0.999			0.997	
Satd. Flow (perm)	0	1732	0	0	1716	0	0	1870	0	0	1818	0
Link Speed (mph)		25			25			20			25	
Link Distance (ft)		451			157			336			396	
Travel Time (s)		12.3			4.3			11.5			10.8	
Confl. Peds. (#/hr)	5		6	2		1	6		2	1		5
Confl. Bikes (#/hr)						1						
Peak Hour Factor	0.83	0.83	0.83	0.67	0.25	0.75	0.93	0.93	0.93	0.84	0.84	0.84
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	25%	1%	0%	0%	0%	0%
Adj. Flow (vph)	10	1	2	15	4	8	4	324	4	7	118	7
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	13	0	0	27	0	0	332	0	0	132	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.04	1.04	1.04	1.04	1.04	1.04	1.00	1.00	1.00	1.04	1.04	1.04
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization	29.1%						ICU Level of Service A					
Analysis Period (min)	15											



# HCM Unsignalized Intersection Capacity Analysis 8: Forest St & Peirce St/Ryder St










2025 No-Build PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	1	2	10	1	6	4	301	4	6	99	6
Future Volume (Veh/h)	8	1	2	10	1	6	4	301	4	6	99	6
Sign Control	Stop				Stop				Free			
Grade	0%				0%				0%			
Peak Hour Factor	0.83	0.83	0.83	0.67	0.25	0.75	0.93	0.93	0.93	0.84	0.84	0.84
Hourly flow rate (vph)	10	1	2	15	4	8	4	324	4	7	118	7
Pedestrians	6				2				6			
Lane Width (ft)	11.0				11.0				12.0			
Walking Speed (ft/s)	3.5				3.5				3.5			
Percent Blockage	1				0				1			
Right turn flare (veh)												
Median type	None								None			
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	490	480	134	480	481	333	131				330	
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	490	480	134	480	481	333	131				330	
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.3				4.1	
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.4				2.2	
p0 queue free %	98	100	100	97	99	99	100				99	
cM capacity (veh/h)	473	481	911	488	480	709	1317				1239	
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	13	27	332	132								
Volume Left	10	15	4	7								
Volume Right	2	8	4	7								
cSH	511	536	1317	1239								
Volume to Capacity	0.03	0.05	0.00	0.01								
Queue Length 95th (ft)	2	4	0	0								
Control Delay (s)	12.2	12.1	0.1	0.5								
Lane LOS	B	B	A	A								
Approach Delay (s)	12.2	12.1	0.1	0.5								
Approach LOS	B	B										
Intersection Summary												
Average Delay			1.2									
Intersection Capacity Utilization			29.1%	ICU Level of Service				A				
Analysis Period (min)			15									



Lanes, Volumes, Timings  
9: Ryder St & South Dr










2025 No-Build PM Peak Hour

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	10	1	6	4	0	10
Future Volume (vph)	10	1	6	4	0	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.985		0.944			
Flt Protected	0.957					
Satd. Flow (prot)	1791	0	1464	0	0	1402
Flt Permitted	0.957					
Satd. Flow (perm)	1791	0	1464	0	0	1402
Link Speed (mph)	25		25			25
Link Distance (ft)	269		157			797
Travel Time (s)	7.3		4.3			21.7
Confl. Peds. (#/hr)	6	5		6	5	
Confl. Bikes (#/hr)				1		
Peak Hour Factor	0.62	0.62	0.59	0.59	0.42	0.42
Heavy Vehicles (%)	0%	0%	0%	25%	0%	22%
Parking (#/hr)			0	0	0	0
Adj. Flow (vph)	16	2	10	7	0	24
Shared Lane Traffic (%)						
Lane Group Flow (vph)	18	0	17	0	0	24
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.14	1.00	1.00	1.14
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	16.7%			ICU Level of Service A		
Analysis Period (min)	15					



# HCM Unsignalized Intersection Capacity Analysis 9: Ryder St & South Dr

















2025 No-Build PM Peak Hour

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	10	1	6	4	0	10
Future Volume (Veh/h)	10	1	6	4	0	10
Sign Control	Stop		Free		Free	
Grade	0%		0%		0%	
Peak Hour Factor	0.62	0.62	0.59	0.59	0.42	0.42
Hourly flow rate (vph)	16	2	10	7	0	24
Pedestrians	6		6		5	
Lane Width (ft)	12.0		12.0		12.0	
Walking Speed (ft/s)	3.5		3.5		3.5	
Percent Blockage	1		1		0	
Right turn flare (veh)						
Median type			None		None	
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	50	24	23			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	50	24	23			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	98	100	100			
cM capacity (veh/h)	954	1047	1596			
Direction, Lane #	WB 1	NB 1	SB 1			
Volume Total	18	17	24			
Volume Left	16	0	0			
Volume Right	2	7	0			
cSH	963	1700	1596			
Volume to Capacity	0.02	0.01	0.00			
Queue Length 95th (ft)	1	0	0			
Control Delay (s)	8.8	0.0	0.0			
Lane LOS	A					
Approach Delay (s)	8.8	0.0	0.0			
Approach LOS	A					
Intersection Summary						
Average Delay			2.7			
Intersection Capacity Utilization			16.7%		ICU Level of Service	A
Analysis Period (min)			15			



Lanes, Volumes, Timings  
1: Appleton St & Appleton Pl & Massachusetts Ave

2025 Build AM Peak Hour

















												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	372	51	315	397	0	19	0	177	0	0	0
Future Volume (vph)	0	372	51	315	397	0	19	0	177	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	14	14	14	14	14	14	12	12	12	12	12	12
Grade (%)		0%			0%			-4%			0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.984						0.878				
Flt Protected					0.978			0.995				
Satd. Flow (prot)	0	1581	0	0	1648	0	0	1678	0	0	1863	0
Flt Permitted					0.978			0.995				
Satd. Flow (perm)	0	1581	0	0	1648	0	0	1678	0	0	1863	0
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		330			357			73			97	
Travel Time (s)		9.0			9.7			2.0			2.6	
Confl. Peds. (#/hr)	109		11	118		215	11		118	215		109
Confl. Bikes (#/hr)			2			1						
Peak Hour Factor	0.75	0.75	0.75	0.84	0.84	0.84	0.85	0.85	0.85	0.92	0.92	0.92
Heavy Vehicles (%)	0%	11%	2%	2%	7%	0%	0%	0%	1%	2%	2%	2%
Bus Blockages (#/hr)	8	8	8	8	8	8	0	0	0	0	0	0
Parking (#/hr)	0	0	0	0	0	0						
Adj. Flow (vph)	0	496	68	375	473	0	22	0	208	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	564	0	0	848	0	0	230	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.92	1.10	0.92	0.92	1.10	0.92	0.97	0.97	0.97	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization	89.0%											
Analysis Period (min)	15											
ICU Level of Service E												



# HCM Unsignalized Intersection Capacity Analysis

## 1: Appleton St & Appleton Pl & Massachusetts Ave










2025 Build AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	372	51	315	397	0	19	0	177	0	0	0
Future Volume (Veh/h)	0	372	51	315	397	0	19	0	177	0	0	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			-4%			0%	
Peak Hour Factor	0.75	0.75	0.75	0.84	0.84	0.84	0.85	0.85	0.85	0.92	0.92	0.92
Hourly flow rate (vph)	0	496	68	375	473	0	22	0	208	0	0	0
Pedestrians		109			215			118			215	
Lane Width (ft)		14.0			14.0			12.0			12.0	
Walking Speed (ft/s)		3.5			3.5			3.5			3.5	
Percent Blockage		12			24			11			20	
Right turn flare (veh)												
Median type	None			None								
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	688			682			1980	2086	863	2391	2120	797
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	688			682			1980	2086	863	2391	2120	797
tC, single (s)	4.1			4.1			*4.0	6.5	*3.0	*3.0	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			*3.0	4.0	*3.0	3.5	4.0	3.3
p0 queue free %	100			54			79	100	62	100	100	100
cM capacity (veh/h)	728			808			107	20	554	69	19	270
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	564	848	230	0								
Volume Left	0	375	22	0								
Volume Right	68	0	208	0								
cSH	728	808	395	1700								
Volume to Capacity	0.00	0.46	0.58	0.01								
Queue Length 95th (ft)	0	62	89	0								
Control Delay (s)	0.0	10.6	26.0	0.0								
Lane LOS		B	D	A								
Approach Delay (s)	0.0	10.6	26.0	0.0								
Approach LOS			D	A								
Intersection Summary												
Average Delay			9.1									
Intersection Capacity Utilization			89.0%	ICU Level of Service				E				
Analysis Period (min)			15									
* User Entered Value												



Lanes, Volumes, Timings  
2: Appleton St & Appleton Pl










2025 Build AM Peak Hour

						
Lane Group	WBL	WBR	SBL	SBR	NEL	NER
Lane Configurations						
Traffic Volume (vph)	39	32	29	337	164	9
Future Volume (vph)	39	32	29	337	164	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	12	12	12	12
Grade (%)	-4%		0%		-4%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.939		0.876		0.993	
Flt Protected	0.973		0.996		0.955	
Satd. Flow (prot)	1657	0	1628	0	1639	0
Flt Permitted	0.973		0.996		0.955	
Satd. Flow (perm)	1657	0	1628	0	1639	0
Link Speed (mph)	25		25		25	
Link Distance (ft)	178		73		363	
Travel Time (s)	4.9		2.0		9.9	
Confl. Peds. (#/hr)	109	91	91	18	18	109
Confl. Bikes (#/hr)						4
Peak Hour Factor	0.38	0.38	0.84	0.84	0.85	0.85
Heavy Vehicles (%)	6%	0%	0%	2%	1%	0%
Parking (#/hr)					0	0
Adj. Flow (vph)	103	84	35	401	193	11
Shared Lane Traffic (%)						
Lane Group Flow (vph)	187	0	436	0	204	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Right
Median Width(ft)	11		12		12	
Link Offset(ft)	0		0		0	
Crosswalk Width(ft)	16		16		16	
Two way Left Turn Lane						
Headway Factor	1.02	1.02	1.00	1.00	1.12	0.97
Turning Speed (mph)	15	9	15	9	15	9
Sign Control	Stop		Free		Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	60.3%			ICU Level of Service B		
Analysis Period (min)	15					



# HCM Unsignalized Intersection Capacity Analysis 2: Appleton St & Appleton Pl

















2025 Build AM Peak Hour

						
Movement	WBL	WBR	SBL	SBR	NEL	NER
Lane Configurations						
Traffic Volume (veh/h)	39	32	29	337	164	9
Future Volume (Veh/h)	39	32	29	337	164	9
Sign Control	Stop		Free		Stop	
Grade	-4%		0%		-4%	
Peak Hour Factor	0.38	0.38	0.84	0.84	0.85	0.85
Hourly flow rate (vph)	103	84	35	401	193	11
Pedestrians	109		91		109	
Lane Width (ft)	11.0		12.0		12.0	
Walking Speed (ft/s)	3.5		3.5		3.5	
Percent Blockage	10		9		10	
Right turn flare (veh)						
Median type			None			
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	689	200	109		606	488
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	689	200	109		606	488
tC, single (s)	*5.0	*5.0	4.1		*5.0	*5.0
tC, 2 stage (s)						
tF (s)	*3.0	*3.0	2.2		*3.0	*3.0
p0 queue free %	78	90	97		43	98
cM capacity (veh/h)	479	816	1352		341	585
Direction, Lane #	WB 1	SB 1	NE 1			
Volume Total	187	436	204			
Volume Left	0	35	193			
Volume Right	84	401	0			
cSH	588	1352	348			
Volume to Capacity	0.32	0.03	0.59			
Queue Length 95th (ft)	34	2	89			
Control Delay (s)	14.0	0.9	28.9			
Lane LOS	B	A	D			
Approach Delay (s)	14.0	0.9	28.9			
Approach LOS	B		D			
Intersection Summary						
Average Delay			10.8			
Intersection Capacity Utilization			60.3%	ICU Level of Service		B
Analysis Period (min)			15			
* User Entered Value						



Lanes, Volumes, Timings  
3: Burton St/Forest St & Massachusetts Ave

















2025 Build AM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	95	454	1	10	491	108	0	10	21	72	24	223
Future Volume (vph)	95	454	1	10	491	108	0	10	21	72	24	223
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	14	14	14	12	12	12	12	12	12	12	12	12
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt					0.976			0.909			0.906	
Flt Protected		0.991			0.999						0.989	
Satd. Flow (prot)	0	1674	0	0	1764	0	0	1554	0	0	1668	0
Flt Permitted		0.991			0.999						0.989	
Satd. Flow (perm)	0	1674	0	0	1764	0	0	1554	0	0	1668	0
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		357			87			283			336	
Travel Time (s)		9.7			2.4			7.7			9.2	
Confl. Peds. (#/hr)	57		56	8		9	56		8	9		57
Confl. Bikes (#/hr)			4			1						
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.44	0.44	0.44	0.89	0.89	0.89
Heavy Vehicles (%)	3%	9%	0%	0%	6%	1%	0%	0%	0%	3%	0%	2%
Parking (#/hr)	0	0	0				0	0	0			
Adj. Flow (vph)	109	522	1	11	564	124	0	23	48	81	27	251
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	632	0	0	699	0	0	71	0	0	359	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.92	1.05	0.92	1.00	1.00	1.00	1.00	1.14	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization	101.0%											
Analysis Period (min)	15											
ICU Level of Service G												



# HCM Unsignalized Intersection Capacity Analysis 3: Burton St/Forest St & Massachusetts Ave

2025 Build AM Peak Hour

														
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR		
Lane Configurations														
Traffic Volume (veh/h)	95	454	1	10	491	108	0	10	21	72	24	223		
Future Volume (Veh/h)	95	454	1	10	491	108	0	10	21	72	24	223		
Sign Control		Free			Free			Stop			Stop			
Grade		0%			0%			0%			0%			
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.44	0.44	0.44	0.89	0.89	0.89		
Hourly flow rate (vph)	109	522	1	11	564	124	0	23	48	81	27	251		
Pedestrians		57			9			56			57			
Lane Width (ft)		14.0			12.0			12.0			12.0			
Walking Speed (ft/s)		3.5			3.5			3.5			3.5			
Percent Blockage		6			1			5			5			
Right turn flare (veh)														
Median type	None			None										
Median storage (veh)														
Upstream signal (ft)														
pX, platoon unblocked														
vC, conflicting volume	745				579				1766	1564	588	1514	1502	740
vC1, stage 1 conf vol														
vC2, stage 2 conf vol														
vCu, unblocked vol	745				579				1766	1564	588	1514	1502	740
tC, single (s)	4.1				4.1				7.1	*5.0	*5.0	*5.0	*5.0	*5.0
tC, 2 stage (s)														
tF (s)	2.2				2.2				3.5	*3.0	*3.0	*3.0	*3.0	*3.0
p0 queue free %	87				99				100	88	92	51	87	51
cM capacity (veh/h)	812				951				22	188	630	167	200	510
Direction, Lane #	EB 1	WB 1	NB 1	SB 1										
Volume Total	632	699	71	359										
Volume Left	109	11	0	81										
Volume Right	1	124	48	251										
cSH	812	951	357	322										
Volume to Capacity	0.13	0.01	0.20	1.11										
Queue Length 95th (ft)	12	1	18	353										
Control Delay (s)	3.4	0.3	17.6	120.8										
Lane LOS	A	A	C	F										
Approach Delay (s)	3.4	0.3	17.6	120.8										
Approach LOS			C	F										
Intersection Summary														
Average Delay				26.7										
Intersection Capacity Utilization				101.0%	ICU Level of Service				G					
Analysis Period (min)				15										
* User Entered Value														



Lanes, Volumes, Timings  
4: Massachusetts Ave & West Dr

2025 Build AM Peak Hour



Lane Group	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations		↰	↱		↰	↱
Traffic Volume (vph)	20	527	608	7	1	1
Future Volume (vph)	20	527	608	7	1	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	14	14	10	10
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt			0.998		0.932	
Flt Protected		0.998			0.976	
Satd. Flow (prot)	0	1584	1718	0	1613	0
Flt Permitted		0.998			0.976	
Satd. Flow (perm)	0	1584	1718	0	1613	0
Link Speed (mph)		25	25		25	
Link Distance (ft)		87	240		169	
Travel Time (s)		2.4	6.5		4.6	
Confl. Peds. (#/hr)	8			8	8	8
Confl. Bikes (#/hr)				1		
Peak Hour Factor	0.87	0.87	0.87	0.87	0.25	0.25
Heavy Vehicles (%)	0%	8%	6%	1%	0%	0%
Parking (#/hr)	0	0	0	0		
Adj. Flow (vph)	23	606	699	8	4	4
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	629	707	0	8	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		10	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.14	1.05	0.92	1.09	1.09
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 56.3% ICU Level of Service B

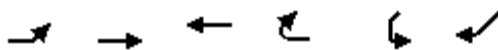
Analysis Period (min) 15






# HCM Unsignalized Intersection Capacity Analysis

## 4: Massachusetts Ave & West Dr

2025 Build AM Peak Hour












Movement	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations						
Traffic Volume (veh/h)	20	527	608	7	1	1
Future Volume (Veh/h)	20	527	608	7	1	1
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.87	0.87	0.87	0.87	0.25	0.25
Hourly flow rate (vph)	23	606	699	8	4	4
Pedestrians		8	8		8	
Lane Width (ft)		12.0	14.0		10.0	
Walking Speed (ft/s)		3.5	3.5		3.5	
Percent Blockage		1	1		1	
Right turn flare (veh)						
Median type		None	None			
Median storage veh						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	715				1371	719
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	715				1371	719
tC, single (s)	4.1				*5.0	*5.0
tC, 2 stage (s)						
tF (s)	2.2				*5.0	*5.0
p0 queue free %	97				98	99
cM capacity (veh/h)	889				230	414
Direction, Lane #	EB 1	WB 1	SW 1			
Volume Total	629	707	8			
Volume Left	23	0	4			
Volume Right	0	8	4			
cSH	889	1700	296			
Volume to Capacity	0.03	0.42	0.03			
Queue Length 95th (ft)	2	0	2			
Control Delay (s)	0.7	0.0	17.5			
Lane LOS	A		C			
Approach Delay (s)	0.7	0.0	17.5			
Approach LOS			C			
Intersection Summary						
Average Delay			0.4			
Intersection Capacity Utilization			56.3%	ICU Level of Service		B
Analysis Period (min)			15			

\* User Entered Value



Lanes, Volumes, Timings  
5: Pine Ct & Massachusetts Ave










2025 Build AM Peak Hour

						
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	534	2	0	611	1	8
Future Volume (vph)	534	2	0	611	1	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	14	14	14	14	12	12
Grade (%)	0%			0%	-4%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt					0.880	
Flt Protected					0.994	
Satd. Flow (prot)	1506	0	0	1563	1526	0
Flt Permitted					0.994	
Satd. Flow (perm)	1506	0	0	1563	1526	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	240			134	415	
Travel Time (s)	6.5			3.7	11.3	
Confl. Peds. (#/hr)		10	10		10	10
Confl. Bikes (#/hr)		3				
Peak Hour Factor	0.85	0.85	0.88	0.88	0.50	0.50
Heavy Vehicles (%)	9%	0%	0%	5%	0%	0%
Parking (#/hr)	0	0	0	0		
Adj. Flow (vph)	628	2	0	694	2	16
Shared Lane Traffic (%)						
Lane Group Flow (vph)	630	0	0	694	18	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.20	1.05	1.05	1.20	1.12	1.12
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	CBD					
Control Type:	Unsignalized					
Intersection Capacity Utilization	48.6%			ICU Level of Service A		
Analysis Period (min)	15					



# HCM Unsignalized Intersection Capacity Analysis 5: Pine Ct & Massachusetts Ave










2025 Build AM Peak Hour

						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	534	2	0	611	1	8
Future Volume (Veh/h)	534	2	0	611	1	8
Sign Control	Free			Free	Stop	
Grade	0%			0%	-4%	
Peak Hour Factor	0.85	0.85	0.88	0.88	0.50	0.50
Hourly flow rate (vph)	628	2	0	694	2	16
Pedestrians	10			10	10	
Lane Width (ft)	14.0			14.0	12.0	
Walking Speed (ft/s)	3.5			3.5	3.5	
Percent Blockage	1			1	1	
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			640	1343		649
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			640	1343		649
tC, single (s)			4.1	*5.0		*5.0
tC, 2 stage (s)						
tF (s)			2.2	*3.0		*3.0
p0 queue free %			100	99		97
cM capacity (veh/h)			945	302		618
Direction, Lane #	EB 1	WB 1	NB 1			
Volume Total	630	694	18			
Volume Left	0	0	2			
Volume Right	2	0	16			
cSH	1700	945	554			
Volume to Capacity	0.37	0.00	0.03			
Queue Length 95th (ft)	0	0	3			
Control Delay (s)	0.0	0.0	11.7			
Lane LOS			B			
Approach Delay (s)	0.0	0.0	11.7			
Approach LOS			B			
Intersection Summary						
Average Delay			0.2			
Intersection Capacity Utilization			48.6%	ICU Level of Service		A
Analysis Period (min)			15			
* User Entered Value						



Lanes, Volumes, Timings  
6: Massachusetts Ave & Quinn Rd










2025 Build AM Peak Hour

						
Lane Group	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Traffic Volume (vph)	28	513	604	10	7	18
Future Volume (vph)	28	513	604	10	7	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	14	14	14	14
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt			0.998		0.902	
Flt Protected		0.997			0.986	
Satd. Flow (prot)	0	1757	1677	0	1636	0
Flt Permitted		0.997			0.986	
Satd. Flow (perm)	0	1757	1677	0	1636	0
Link Speed (mph)		25	25		25	
Link Distance (ft)		134	384		203	
Travel Time (s)		3.7	10.5		5.5	
Confl. Peds. (#/hr)	10			10	10	10
Confl. Bikes (#/hr)				3		
Peak Hour Factor	0.85	0.85	0.88	0.88	0.62	0.62
Heavy Vehicles (%)	4%	8%	5%	0%	0%	14%
Parking (#/hr)			6	0		
Adj. Flow (vph)	33	604	686	11	11	29
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	637	697	0	40	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		14	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.10	0.92	0.92	0.92
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	62.7%			ICU Level of Service B		
Analysis Period (min)	15					



# HCM Unsignalized Intersection Capacity Analysis 6: Massachusetts Ave & Quinn Rd










2025 Build AM Peak Hour

						
Movement	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Traffic Volume (veh/h)	28	513	604	10	7	18
Future Volume (Veh/h)	28	513	604	10	7	18
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.85	0.85	0.88	0.88	0.62	0.62
Hourly flow rate (vph)	33	604	686	11	11	29
Pedestrians		10	10		10	
Lane Width (ft)		12.0	14.0		14.0	
Walking Speed (ft/s)		3.5	3.5		3.5	
Percent Blockage		1	1		1	
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	707				1382	712
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	707				1382	712
tC, single (s)	4.1				*5.0	*5.0
tC, 2 stage (s)						
tF (s)	2.2				*3.0	*3.0
p0 queue free %	96				96	95
cM capacity (veh/h)	872				279	580
Direction, Lane #	SE 1	NW 1	SW 1			
Volume Total	637	697	40			
Volume Left	33	0	11			
Volume Right	0	11	29			
cSH	872	1700	447			
Volume to Capacity	0.04	0.41	0.09			
Queue Length 95th (ft)	3	0	7			
Control Delay (s)	1.0	0.0	13.8			
Lane LOS	A		B			
Approach Delay (s)	1.0	0.0	13.8			
Approach LOS			B			
<b>Intersection Summary</b>						
Average Delay			0.9			
Intersection Capacity Utilization			62.7%	ICU Level of Service		B
Analysis Period (min)			15			
* User Entered Value						



Lanes, Volumes, Timings  
7: West Dr/Mill Brook Br & Quinn Access Rd

2025 Build AM Peak Hour










						
Lane Group	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Volume (vph)	2	1	17	8	18	0
Future Volume (vph)	2	1	17	8	18	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	9	9
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.966		0.957			
Flt Protected	0.964					0.950
Satd. Flow (prot)	1592	0	1818	0	0	1354
Flt Permitted	0.964					0.950
Satd. Flow (perm)	1592	0	1818	0	0	1354
Link Speed (mph)	25		25			25
Link Distance (ft)	315		169			187
Travel Time (s)	8.6		4.6			5.1
Peak Hour Factor	0.75	0.75	0.61	0.61	0.35	0.35
Heavy Vehicles (%)	0%	0%	0%	0%	20%	0%
Parking (#/hr)	0	0				
Adj. Flow (vph)	3	1	28	13	51	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	4	0	41	0	0	51
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.14	1.00	1.00	1.00	1.14	1.14
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	17.7%			ICU Level of Service A		
Analysis Period (min)	15					



# HCM Unsignalized Intersection Capacity Analysis

## 7: West Dr/Mill Brook Br & Quinn Access Rd

















2025 Build AM Peak Hour

						
Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Volume (veh/h)	2	1	17	8	18	0
Future Volume (Veh/h)	2	1	17	8	18	0
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.75	0.75	0.61	0.61	0.35	0.35
Hourly flow rate (vph)	3	1	28	13	51	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	136	34			41	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	136	34			41	
tC, single (s)	6.4	6.2			4.3	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.4	
p0 queue free %	100	100			97	
cM capacity (veh/h)	832	1044			1460	
Direction, Lane #	NW 1	NE 1	SW 1			
Volume Total	4	41	51			
Volume Left	3	0	51			
Volume Right	1	13	0			
cSH	876	1700	1460			
Volume to Capacity	0.00	0.02	0.03			
Queue Length 95th (ft)	0	0	3			
Control Delay (s)	9.1	0.0	7.6			
Lane LOS	A		A			
Approach Delay (s)	9.1	0.0	7.6			
Approach LOS	A					
Intersection Summary						
Average Delay			4.4			
Intersection Capacity Utilization			17.7%	ICU Level of Service	A	
Analysis Period (min)			15			



Lanes, Volumes, Timings  
8: Forest St & Peirce St/Ryder St

















2025 Build AM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	11	0	1	18	0	3	3	189	5	10	297	69
Future Volume (vph)	11	0	1	18	0	3	3	189	5	10	297	69
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	12	12	12	11	11	11
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.988			0.982			0.997			0.975	
Flt Protected		0.957			0.958			0.999			0.999	
Satd. Flow (prot)	0	1737	0	0	1420	0	0	1849	0	0	1769	0
Flt Permitted		0.957			0.958			0.999			0.999	
Satd. Flow (perm)	0	1737	0	0	1420	0	0	1849	0	0	1769	0
Link Speed (mph)		25			25			20			25	
Link Distance (ft)		451			157			336			396	
Travel Time (s)		12.3			4.3			11.5			10.8	
Confl. Peds. (#/hr)	10		13	3			13		3			10
Peak Hour Factor	0.55	0.55	0.55	0.69	0.69	0.69	0.82	0.82	0.82	0.86	0.86	0.86
Heavy Vehicles (%)	0%	0%	0%	25%	0%	0%	33%	1%	33%	0%	1%	2%
Adj. Flow (vph)	20	0	2	26	0	4	4	230	6	12	345	80
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	22	0	0	30	0	0	240	0	0	437	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.04	1.04	1.04	1.04	1.04	1.04	1.00	1.00	1.00	1.04	1.04	1.04
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization	39.3%											
Analysis Period (min)	15											
ICU Level of Service A												



# HCM Unsignalized Intersection Capacity Analysis 8: Forest St & Peirce St/Ryder St










2025 Build AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	11	0	1	18	0	3	3	189	5	10	297	69
Future Volume (Veh/h)	11	0	1	18	0	3	3	189	5	10	297	69
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.55	0.55	0.55	0.69	0.69	0.69	0.82	0.82	0.82	0.86	0.86	0.86
Hourly flow rate (vph)	20	0	2	26	0	4	4	230	6	12	345	80
Pedestrians		13			3			13			10	
Lane Width (ft)		11.0			11.0			12.0			11.0	
Walking Speed (ft/s)		3.5			3.5			3.5			3.5	
Percent Blockage		1			0			1			1	
Right turn flare (veh)												
Median type								None			None	
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	677	669	411	668	706	246	438			239		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	677	669	411	668	706	246	438			239		
tC, single (s)	7.1	6.5	6.2	7.3	6.5	6.2	4.4			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.7	4.0	3.3	2.5			2.2		
p0 queue free %	94	100	100	92	100	99	100			99		
cM capacity (veh/h)	353	371	630	329	353	789	964			1336		
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	22	30	240	437								
Volume Left	20	26	4	12								
Volume Right	2	4	6	80								
cSH	367	357	964	1336								
Volume to Capacity	0.06	0.08	0.00	0.01								
Queue Length 95th (ft)	5	7	0	1								
Control Delay (s)	15.4	16.0	0.2	0.3								
Lane LOS	C	C	A	A								
Approach Delay (s)	15.4	16.0	0.2	0.3								
Approach LOS	C	C										
Intersection Summary												
Average Delay			1.4									
Intersection Capacity Utilization			39.3%		ICU Level of Service				A			
Analysis Period (min)			15									



Lanes, Volumes, Timings  
9: Ryder St & South Dr










2025 Build AM Peak Hour

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	11	0	8	7	3	10
Future Volume (vph)	11	0	8	7	3	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.936					
Flt Protected	0.950					0.988
Satd. Flow (prot)	1805	0	1440	0	0	1450
Flt Permitted	0.950					0.988
Satd. Flow (perm)	1805	0	1440	0	0	1450
Link Speed (mph)	25		25			25
Link Distance (ft)	269		157			797
Travel Time (s)	7.3		4.3			21.7
Confl. Peds. (#/hr)	32	32		32	32	
Confl. Bikes (#/hr)				2		
Peak Hour Factor	0.38	0.38	0.71	0.71	0.81	0.81
Heavy Vehicles (%)	0%	0%	14%	8%	0%	22%
Parking (#/hr)			0	0	0	0
Adj. Flow (vph)	29	0	11	10	4	12
Shared Lane Traffic (%)						
Lane Group Flow (vph)	29	0	21	0	0	16
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.14	1.00	1.00	1.14
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	26.5%			ICU Level of Service A		
Analysis Period (min)	15					



# HCM Unsignalized Intersection Capacity Analysis 9: Ryder St & South Dr

















2025 Build AM Peak Hour

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	11	0	8	7	3	10
Future Volume (Veh/h)	11	0	8	7	3	10
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.38	0.38	0.71	0.71	0.81	0.81
Hourly flow rate (vph)	29	0	11	10	4	12
Pedestrians	32		32			32
Lane Width (ft)	12.0		12.0			12.0
Walking Speed (ft/s)	3.5		3.5			3.5
Percent Blockage	3		3			3
Right turn flare (veh)						
Median type			None			None
Median storage veh						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	100	80			53	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	100	80			53	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	97	100			100	
cM capacity (veh/h)	847	927			1518	
Direction, Lane #	WB 1	NB 1	SB 1			
Volume Total	29	21	16			
Volume Left	29	0	4			
Volume Right	0	10	0			
cSH	847	1700	1518			
Volume to Capacity	0.03	0.01	0.00			
Queue Length 95th (ft)	3	0	0			
Control Delay (s)	9.4	0.0	1.9			
Lane LOS	A		A			
Approach Delay (s)	9.4	0.0	1.9			
Approach LOS	A					
Intersection Summary						
Average Delay		4.6				
Intersection Capacity Utilization		26.5%		ICU Level of Service		A
Analysis Period (min)		15				



Lanes, Volumes, Timings  
1: Appleton St & Appleton Pl & Massachusetts Ave

2025 Build PM Peak Hour

















												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	3	474	20	126	351	2	20	1	364	1	1	3
Future Volume (vph)	3	474	20	126	351	2	20	1	364	1	1	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	14	14	14	14	14	14	12	12	12	12	12	12
Grade (%)		0%			0%			-4%			0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.994						0.872			0.925	
Flt Protected					0.987			0.997			0.989	
Satd. Flow (prot)	0	1722	0	0	1701	0	0	1669	0	0	1738	0
Flt Permitted					0.987			0.997			0.989	
Satd. Flow (perm)	0	1722	0	0	1701	0	0	1669	0	0	1738	0
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		330			357			73			97	
Travel Time (s)		9.0			9.7			2.0			2.6	
Confl. Peds. (#/hr)	21		1	7		27	1		7	27		21
Confl. Bikes (#/hr)			2			2						
Peak Hour Factor	0.93	0.93	0.93	0.88	0.88	0.88	0.90	0.90	0.90	0.62	0.62	0.62
Heavy Vehicles (%)	0%	2%	0%	1%	3%	0%	0%	0%	1%	0%	0%	0%
Bus Blockages (#/hr)	8	8	8	8	8	8	0	0	0	0	0	0
Parking (#/hr)	0	0	0	0	0	0						
Adj. Flow (vph)	3	510	22	143	399	2	22	1	404	2	2	5
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	535	0	0	544	0	0	427	0	0	9	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.92	1.10	0.92	0.92	1.10	0.92	0.97	0.97	0.97	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization 87.9%	ICU Level of Service E											
Analysis Period (min) 15												



# HCM Unsignalized Intersection Capacity Analysis

## 1: Appleton St & Appleton Pl & Massachusetts Ave










2025 Build PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	3	474	20	126	351	2	20	1	364	1	1	3
Future Volume (Veh/h)	3	474	20	126	351	2	20	1	364	1	1	3
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			-4%			0%	
Peak Hour Factor	0.93	0.93	0.93	0.88	0.88	0.88	0.90	0.90	0.90	0.62	0.62	0.62
Hourly flow rate (vph)	3	510	22	143	399	2	22	1	404	2	2	5
Pedestrians		21			27			7			27	
Lane Width (ft)		14.0			14.0			12.0			12.0	
Walking Speed (ft/s)		3.5			3.5			3.5			3.5	
Percent Blockage		2			3			1			3	
Right turn flare (veh)												
Median type	None			None								
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	428			539			1247	1248	555	1672	1258	448
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	428			539			1247	1248	555	1672	1258	448
tC, single (s)	4.1			4.1			*5.0	*5.0	*5.0	*5.0	*5.0	*5.0
tC, 2 stage (s)												
tF (s)	2.2			2.2			*3.0	*3.0	*3.0	*3.0	*3.0	*3.0
p0 queue free %	100			86			92	100	40	97	99	99
cM capacity (veh/h)	1113			1028			285	283	668	71	280	734
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	535	544	427	9								
Volume Left	3	143	22	2								
Volume Right	22	2	404	5								
cSH	1113	1028	623	213								
Volume to Capacity	0.00	0.14	0.69	0.04								
Queue Length 95th (ft)	0	12	134	3								
Control Delay (s)	0.1	3.6	22.4	22.6								
Lane LOS	A	A	C	C								
Approach Delay (s)	0.1	3.6	22.4	22.6								
Approach LOS			C	C								
Intersection Summary												
Average Delay			7.8									
Intersection Capacity Utilization			87.9%	ICU Level of Service				E				
Analysis Period (min)			15									
* User Entered Value												



Lanes, Volumes, Timings  
2: Appleton St & Appleton Pl










2025 Build PM Peak Hour

						
Lane Group	WBL	WBR	SBL	SBR	NEL	NER
Lane Configurations						
Traffic Volume (vph)	3	25	11	136	360	6
Future Volume (vph)	3	25	11	136	360	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	12	12	12	12
Grade (%)	-4%		0%		-4%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.881		0.875		0.998	
Flt Protected	0.994		0.996		0.953	
Satd. Flow (prot)	1641	0	1626	0	1643	0
Flt Permitted	0.994		0.996		0.953	
Satd. Flow (perm)	1641	0	1626	0	1643	0
Link Speed (mph)	25		25		25	
Link Distance (ft)	178		73		363	
Travel Time (s)	4.9		2.0		9.9	
Confl. Peds. (#/hr)	20	18	9	11	11	20
Peak Hour Factor	0.65	0.65	0.84	0.84	0.90	0.90
Heavy Vehicles (%)	0%	0%	0%	2%	1%	0%
Parking (#/hr)					0	0
Adj. Flow (vph)	5	38	13	162	400	7
Shared Lane Traffic (%)						
Lane Group Flow (vph)	43	0	175	0	407	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Right
Median Width(ft)	11		12		12	
Link Offset(ft)	0		0		0	
Crosswalk Width(ft)	16		16		16	
Two way Left Turn Lane						
Headway Factor	1.02	1.02	1.00	1.00	1.12	0.97
Turning Speed (mph)	15	9	15	9	15	9
Sign Control	Stop		Free		Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	49.3%			ICU Level of Service A		
Analysis Period (min)	15					



# HCM Unsignalized Intersection Capacity Analysis 2: Appleton St & Appleton Pl

















2025 Build PM Peak Hour

						
Movement	WBL	WBR	SBL	SBR	NEL	NER
Lane Configurations						
Traffic Volume (veh/h)	3	25	11	136	360	6
Future Volume (Veh/h)	3	25	11	136	360	6
Sign Control	Stop		Free		Stop	
Grade	-4%		0%		-4%	
Peak Hour Factor	0.65	0.65	0.84	0.84	0.90	0.90
Hourly flow rate (vph)	5	38	13	162	400	7
Pedestrians	20		18		20	
Lane Width (ft)	11.0		12.0		12.0	
Walking Speed (ft/s)	3.5		3.5		3.5	
Percent Blockage	2		2		2	
Right turn flare (veh)						
Median type			None			
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	228	38	20		186	147
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	228	38	20		186	147
tC, single (s)	*5.0	*5.0	4.1		*5.0	*5.0
tC, 2 stage (s)						
tF (s)	*3.0	*3.0	2.2		*3.0	*3.0
p0 queue free %	99	97	99		55	99
cM capacity (veh/h)	918	1117	1581		897	994
Direction, Lane #	WB 1	SB 1	NE 1			
Volume Total	43	175	407			
Volume Left	0	13	400			
Volume Right	38	162	0			
cSH	1089	1581	899			
Volume to Capacity	0.04	0.01	0.45			
Queue Length 95th (ft)	3	1	60			
Control Delay (s)	8.4	0.6	12.3			
Lane LOS	A	A	B			
Approach Delay (s)	8.4	0.6	12.3			
Approach LOS	A		B			
Intersection Summary						
Average Delay			8.7			
Intersection Capacity Utilization			49.3%	ICU Level of Service		A
Analysis Period (min)			15			
* User Entered Value						



Lanes, Volumes, Timings  
3: Burton St/Forest St & Massachusetts Ave

















2025 Build PM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	220	631	2	3	406	98	1	3	9	42	4	74
Future Volume (vph)	220	631	2	3	406	98	1	3	9	42	4	74
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	14	14	14	12	12	12	12	12	12	12	12	12
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt					0.974			0.908			0.917	
Flt Protected		0.987						0.995			0.983	
Satd. Flow (prot)	0	1676	0	0	1800	0	0	1545	0	0	1713	0
Flt Permitted		0.987						0.995			0.983	
Satd. Flow (perm)	0	1676	0	0	1800	0	0	1545	0	0	1713	0
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		357			87			283			336	
Travel Time (s)		9.7			2.4			7.7			9.2	
Confl. Peds. (#/hr)	19		21			2	19		14	16		21
Confl. Bikes (#/hr)			2			3						1
Peak Hour Factor	0.93	0.93	0.93	0.88	0.88	0.88	0.60	0.60	0.60	0.81	0.81	0.81
Heavy Vehicles (%)	3%	9%	0%	0%	3%	2%	0%	0%	0%	0%	0%	0%
Parking (#/hr)	0	0	0				0	0	0			
Adj. Flow (vph)	237	678	2	3	461	111	2	5	15	52	5	91
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	917	0	0	575	0	0	22	0	0	148	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.92	1.05	0.92	1.00	1.00	1.00	1.00	1.14	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization	98.0%											
Analysis Period (min)	15											
ICU Level of Service F												



# HCM Unsignalized Intersection Capacity Analysis 3: Burton St/Forest St & Massachusetts Ave

2025 Build PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	220	631	2	3	406	98	1	3	9	42	4	74
Future Volume (Veh/h)	220	631	2	3	406	98	1	3	9	42	4	74
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.93	0.93	0.93	0.88	0.88	0.88	0.60	0.60	0.60	0.81	0.81	0.81
Hourly flow rate (vph)	237	678	2	3	461	111	2	5	15	52	5	91
Pedestrians		21			16			21			19	
Lane Width (ft)		14.0			12.0			12.0			12.0	
Walking Speed (ft/s)		3.5			3.5			3.5			3.5	
Percent Blockage		2			2			2			2	
Right turn flare (veh)												
Median type		None			None							
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	591			701			1811	1771	716	1728	1716	556
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	591			701			1811	1771	716	1728	1716	556
tC, single (s)	4.1			4.1			*5.0	*5.0	*5.0	*5.0	*5.0	*5.0
tC, 2 stage (s)												
tF (s)	2.2			2.2			*3.0	*3.0	*3.0	*3.0	*3.0	*3.0
p0 queue free %	75			100			98	96	97	65	97	86
cM capacity (veh/h)	962			887			119	142	569	148	150	664
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	917	575	22	148								
Volume Left	237	3	2	52								
Volume Right	2	111	15	91								
cSH	962	887	281	284								
Volume to Capacity	0.25	0.00	0.08	0.52								
Queue Length 95th (ft)	24	0	6	70								
Control Delay (s)	5.6	0.1	18.9	30.7								
Lane LOS	A	A	C	D								
Approach Delay (s)	5.6	0.1	18.9	30.7								
Approach LOS			C	D								
Intersection Summary												
Average Delay			6.1									
Intersection Capacity Utilization			98.0%		ICU Level of Service				F			
Analysis Period (min)			15									
* User Entered Value												



Lanes, Volumes, Timings  
4: Massachusetts Ave & West Dr

2025 Build PM Peak Hour



Lane Group	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations		↰	↱		↰	↱
Traffic Volume (vph)	18	664	498	17	3	9
Future Volume (vph)	18	664	498	17	3	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	14	14	10	10
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt			0.996		0.901	
Flt Protected		0.999			0.987	
Satd. Flow (prot)	0	1676	1765	0	1577	0
Flt Permitted		0.999			0.987	
Satd. Flow (perm)	0	1676	1765	0	1577	0
Link Speed (mph)		25	25		25	
Link Distance (ft)		87	240		169	
Travel Time (s)		2.4	6.5		4.6	
Confl. Peds. (#/hr)					19	19
Confl. Bikes (#/hr)				3		
Peak Hour Factor	0.93	0.93	0.88	0.88	0.64	0.64
Heavy Vehicles (%)	0%	2%	3%	0%	0%	0%
Parking (#/hr)	0	0	0	0		
Adj. Flow (vph)	19	714	566	19	5	14
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	733	585	0	19	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		10	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.14	1.05	0.92	1.09	1.09
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 64.1% ICU Level of Service C

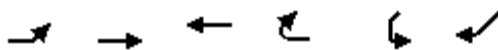
Analysis Period (min) 15






# HCM Unsignalized Intersection Capacity Analysis

## 4: Massachusetts Ave & West Dr

2025 Build PM Peak Hour












Movement	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations						
Traffic Volume (veh/h)	18	664	498	17	3	9
Future Volume (Veh/h)	18	664	498	17	3	9
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.93	0.93	0.88	0.88	0.64	0.64
Hourly flow rate (vph)	19	714	566	19	5	14
Pedestrians		19	19			
Lane Width (ft)		12.0	14.0			
Walking Speed (ft/s)		3.5	3.5			
Percent Blockage		2	2			
Right turn flare (veh)						
Median type		None	None			
Median storage veh						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	585				1346	594
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	585				1346	594
tC, single (s)	4.1				*5.0	*5.0
tC, 2 stage (s)						
tF (s)	2.2				*3.0	*3.0
p0 queue free %	98				98	98
cM capacity (veh/h)	1000				295	654
Direction, Lane #	EB 1	WB 1	SW 1			
Volume Total	733	585	19			
Volume Left	19	0	5			
Volume Right	0	19	14			
cSH	1000	1700	496			
Volume to Capacity	0.02	0.34	0.04			
Queue Length 95th (ft)	1	0	3			
Control Delay (s)	0.5	0.0	12.5			
Lane LOS	A		B			
Approach Delay (s)	0.5	0.0	12.5			
Approach LOS			B			
Intersection Summary						
Average Delay			0.5			
Intersection Capacity Utilization			64.1%	ICU Level of Service		C
Analysis Period (min)			15			

\* User Entered Value



Lanes, Volumes, Timings  
5: Pine Ct & Massachusetts Ave

2025 Build PM Peak Hour

						
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	668	3	2	518	1	1
Future Volume (vph)	668	3	2	518	1	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	14	14	14	14	12	12
Grade (%)	0%			0%	-4%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.999				0.932	
Flt Protected					0.976	
Satd. Flow (prot)	1608	0	0	1641	1587	0
Flt Permitted					0.976	
Satd. Flow (perm)	1608	0	0	1641	1587	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	240			134	415	
Travel Time (s)	6.5			3.7	11.3	
Confl. Peds. (#/hr)		8	8		8	8
Confl. Bikes (#/hr)		1				
Peak Hour Factor	0.92	0.92	0.90	0.90	0.50	0.50
Heavy Vehicles (%)	2%	0%	3%	0%	0%	0%
Parking (#/hr)	0	0	0	0		
Adj. Flow (vph)	726	3	2	576	2	2
Shared Lane Traffic (%)						
Lane Group Flow (vph)	729	0	0	578	4	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.20	1.05	1.05	1.20	1.12	1.12
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	CBD					
Control Type:	Unsignalized					
Intersection Capacity Utilization	51.6%			ICU Level of Service A		
Analysis Period (min)	15					



# HCM Unsignalized Intersection Capacity Analysis

## 5: Pine Ct & Massachusetts Ave










2025 Build PM Peak Hour

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↶			↷	↘	↗
Traffic Volume (veh/h)	668	3	2	518	1	1
Future Volume (Veh/h)	668	3	2	518	1	1
Sign Control	Free			Free	Stop	
Grade	0%			0%	-4%	
Peak Hour Factor	0.92	0.92	0.90	0.90	0.50	0.50
Hourly flow rate (vph)	726	3	2	576	2	2
Pedestrians	8			8	8	
Lane Width (ft)	14.0			14.0	12.0	
Walking Speed (ft/s)	3.5			3.5	3.5	
Percent Blockage	1			1	1	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			737		1324	744
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			737		1324	744
tC, single (s)			4.1		*5.0	*5.0
tC, 2 stage (s)						
tF (s)			2.2		*3.0	*3.0
p0 queue free %			100		99	100
cM capacity (veh/h)			858		309	564
Direction, Lane #	EB 1	WB 1	NB 1			
Volume Total	729	578	4			
Volume Left	0	2	2			
Volume Right	3	0	2			
cSH	1700	858	399			
Volume to Capacity	0.43	0.00	0.01			
Queue Length 95th (ft)	0	0	1			
Control Delay (s)	0.0	0.1	14.1			
Lane LOS		A	B			
Approach Delay (s)	0.0	0.1	14.1			
Approach LOS			B			
Intersection Summary						
Average Delay		0.1				
Intersection Capacity Utilization		51.6%	ICU Level of Service	A		
Analysis Period (min)		15				
* User Entered Value						



Lanes, Volumes, Timings  
6: Massachusetts Ave & Quinn Rd










2025 Build PM Peak Hour

						
Lane Group	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Traffic Volume (vph)	4	662	499	8	22	19
Future Volume (vph)	4	662	499	8	22	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	14	14	14	14
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt			0.998		0.937	
Flt Protected					0.974	
Satd. Flow (prot)	0	1863	1726	0	1808	0
Flt Permitted					0.974	
Satd. Flow (perm)	0	1863	1726	0	1808	0
Link Speed (mph)		25	25		25	
Link Distance (ft)		134	384		203	
Travel Time (s)		3.7	10.5		5.5	
Confl. Peds. (#/hr)	20			21	21	20
Confl. Bikes (#/hr)				7		
Peak Hour Factor	0.98	0.98	0.90	0.90	0.50	0.50
Heavy Vehicles (%)	0%	2%	2%	0%	0%	5%
Parking (#/hr)			6	0		
Adj. Flow (vph)	4	676	554	9	44	38
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	680	563	0	82	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		14	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.10	0.92	0.92	0.92
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	52.9%			ICU Level of Service A		
Analysis Period (min)	15					



# HCM Unsignalized Intersection Capacity Analysis 6: Massachusetts Ave & Quinn Rd










2025 Build PM Peak Hour

						
Movement	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Traffic Volume (veh/h)	4	662	499	8	22	19
Future Volume (Veh/h)	4	662	499	8	22	19
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.98	0.98	0.90	0.90	0.50	0.50
Hourly flow rate (vph)	4	676	554	9	44	38
Pedestrians		20	21		21	
Lane Width (ft)		12.0	14.0		14.0	
Walking Speed (ft/s)		3.5	3.5		3.5	
Percent Blockage		2	2		2	
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	584				1284	600
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	584				1284	600
tC, single (s)	4.1				*5.0	*5.0
tC, 2 stage (s)						
tF (s)	2.2				*3.0	*3.0
p0 queue free %	100				86	94
cM capacity (veh/h)	977				312	635
Direction, Lane #	SE 1	NW 1	SW 1			
Volume Total	680	563	82			
Volume Left	4	0	44			
Volume Right	0	9	38			
cSH	977	1700	408			
Volume to Capacity	0.00	0.33	0.20			
Queue Length 95th (ft)	0	0	19			
Control Delay (s)	0.1	0.0	16.0			
Lane LOS	A		C			
Approach Delay (s)	0.1	0.0	16.0			
Approach LOS			C			
<b>Intersection Summary</b>						
Average Delay			1.0			
Intersection Capacity Utilization			52.9%	ICU Level of Service		A
Analysis Period (min)			15			
* User Entered Value						



Lanes, Volumes, Timings  
7: West Dr/Mill Brook Br & Quinn Access Rd










2025 Build PM Peak Hour

						
Lane Group	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Volume (vph)	7	2	29	3	9	3
Future Volume (vph)	7	2	29	3	9	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	9	9
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.973		0.988			
Flt Protected	0.962					0.964
Satd. Flow (prot)	1601	0	1877	0	0	1644
Flt Permitted	0.962					0.964
Satd. Flow (perm)	1601	0	1877	0	0	1644
Link Speed (mph)	25		25			25
Link Distance (ft)	315		169			187
Travel Time (s)	8.6		4.6			5.1
Confl. Peds. (#/hr)	2	2		2	2	
Peak Hour Factor	0.58	0.58	0.58	0.58	0.50	0.50
Heavy Vehicles (%)	0%	0%	0%	0%	0%	1%
Parking (#/hr)	0	0				
Adj. Flow (vph)	12	3	50	5	18	6
Shared Lane Traffic (%)						
Lane Group Flow (vph)	15	0	55	0	0	24
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.14	1.00	1.00	1.00	1.14	1.14
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	18.0%			ICU Level of Service A		
Analysis Period (min)	15					



# HCM Unsignalized Intersection Capacity Analysis 7: West Dr/Mill Brook Br & Quinn Access Rd

















2025 Build PM Peak Hour

						
Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Volume (veh/h)	7	2	29	3	9	3
Future Volume (Veh/h)	7	2	29	3	9	3
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.58	0.58	0.58	0.58	0.50	0.50
Hourly flow rate (vph)	12	3	50	5	18	6
Pedestrians	2		2			2
Lane Width (ft)	12.0		12.0			9.0
Walking Speed (ft/s)	3.5		3.5			3.5
Percent Blockage	0		0			0
Right turn flare (veh)						
Median type			None			None
Median storage veh						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	98	56			57	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	98	56			57	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	99	100			99	
cM capacity (veh/h)	891	1012			1557	
Direction, Lane #	NW 1	NE 1	SW 1			
Volume Total	15	55	24			
Volume Left	12	0	18			
Volume Right	3	5	0			
cSH	913	1700	1557			
Volume to Capacity	0.02	0.03	0.01			
Queue Length 95th (ft)	1	0	1			
Control Delay (s)	9.0	0.0	5.5			
Lane LOS	A		A			
Approach Delay (s)	9.0	0.0	5.5			
Approach LOS	A					
Intersection Summary						
Average Delay			2.8			
Intersection Capacity Utilization		18.0%		ICU Level of Service		A
Analysis Period (min)		15				



Lanes, Volumes, Timings  
8: Forest St & Peirce St/Ryder St

















2025 Build PM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	8	1	2	12	1	3	4	299	3	6	99	1
Future Volume (vph)	8	1	2	12	1	3	4	299	3	6	99	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	12	12	12	11	11	11
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.979			0.979			0.999			0.999	
Flt Protected		0.963			0.967			0.999			0.997	
Satd. Flow (prot)	0	1732	0	0	1739	0	0	1872	0	0	1829	0
Flt Permitted		0.963			0.967			0.999			0.997	
Satd. Flow (perm)	0	1732	0	0	1739	0	0	1872	0	0	1829	0
Link Speed (mph)		25			25			20			25	
Link Distance (ft)		451			157			336			396	
Travel Time (s)		12.3			4.3			11.5			10.8	
Confl. Peds. (#/hr)	5		6	2		1	6		2	1		5
Confl. Bikes (#/hr)						1						
Peak Hour Factor	0.83	0.83	0.83	0.67	0.25	0.75	0.93	0.93	0.93	0.84	0.84	0.84
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	25%	1%	0%	0%	0%	0%
Adj. Flow (vph)	10	1	2	18	4	4	4	322	3	7	118	1
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	13	0	0	26	0	0	329	0	0	126	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.04	1.04	1.04	1.04	1.04	1.04	1.00	1.00	1.00	1.04	1.04	1.04
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization	28.9%						ICU Level of Service A					
Analysis Period (min)	15											



# HCM Unsignalized Intersection Capacity Analysis 8: Forest St & Peirce St/Ryder St










2025 Build PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	1	2	12	1	3	4	299	3	6	99	1
Future Volume (Veh/h)	8	1	2	12	1	3	4	299	3	6	99	1
Sign Control	Stop			Stop			Free			Free		
Grade	0%			0%			0%			0%		
Peak Hour Factor	0.83	0.83	0.83	0.67	0.25	0.75	0.93	0.93	0.93	0.84	0.84	0.84
Hourly flow rate (vph)	10	1	2	18	4	4	4	322	3	7	118	1
Pedestrians	6			2			6			5		
Lane Width (ft)	11.0			11.0			12.0			11.0		
Walking Speed (ft/s)	3.5			3.5			3.5			3.5		
Percent Blockage	1			0			1			0		
Right turn flare (veh)												
Median type							None			None		
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	481	474	130	474	472	330	125				327	
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	481	474	130	474	472	330	125				327	
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.3				4.1	
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.4				2.2	
p0 queue free %	98	100	100	96	99	99	100				99	
cM capacity (veh/h)	482	485	914	492	485	711	1324				1242	
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	13	26	329	126								
Volume Left	10	18	4	7								
Volume Right	2	4	3	1								
cSH	520	515	1324	1242								
Volume to Capacity	0.02	0.05	0.00	0.01								
Queue Length 95th (ft)	2	4	0	0								
Control Delay (s)	12.1	12.4	0.1	0.5								
Lane LOS	B	B	A	A								
Approach Delay (s)	12.1	12.4	0.1	0.5								
Approach LOS	B	B										
Intersection Summary												
Average Delay				1.2								
Intersection Capacity Utilization				28.9%	ICU Level of Service				A			
Analysis Period (min)				15								



Lanes, Volumes, Timings  
9: Ryder St & South Dr










2025 Build PM Peak Hour

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	11	1	6	3	0	10
Future Volume (vph)	11	1	6	3	0	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.986		0.955			
Flt Protected	0.957					
Satd. Flow (prot)	1793	0	1507	0	0	1402
Flt Permitted	0.957					
Satd. Flow (perm)	1793	0	1507	0	0	1402
Link Speed (mph)	25		25			25
Link Distance (ft)	269		157			797
Travel Time (s)	7.3		4.3			21.7
Confl. Peds. (#/hr)	6	5		6	5	
Confl. Bikes (#/hr)				1		
Peak Hour Factor	0.62	0.62	0.59	0.59	0.42	0.42
Heavy Vehicles (%)	0%	0%	0%	25%	0%	22%
Parking (#/hr)			0	0	0	0
Adj. Flow (vph)	18	2	10	5	0	24
Shared Lane Traffic (%)						
Lane Group Flow (vph)	20	0	15	0	0	24
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.14	1.00	1.00	1.14
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	16.7%			ICU Level of Service A		
Analysis Period (min)	15					

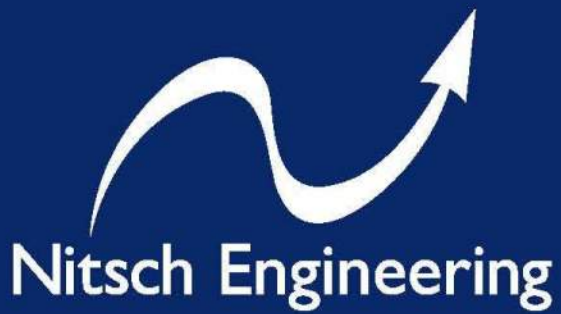


# HCM Unsignalized Intersection Capacity Analysis 9: Ryder St & South Dr

2025 Build PM Peak Hour

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	11	1	6	3	0	10
Future Volume (Veh/h)	11	1	6	3	0	10
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.62	0.62	0.59	0.59	0.42	0.42
Hourly flow rate (vph)	18	2	10	5	0	24
Pedestrians	6		6			5
Lane Width (ft)	12.0		12.0			12.0
Walking Speed (ft/s)	3.5		3.5			3.5
Percent Blockage	1		1			0
Right turn flare (veh)						
Median type			None			None
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	48	24			21	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	48	24			21	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	98	100			100	
cM capacity (veh/h)	955	1048			1599	
Direction, Lane #	WB 1	NB 1	SB 1			
Volume Total	20	15	24			
Volume Left	18	0	0			
Volume Right	2	5	0			
cSH	964	1700	1599			
Volume to Capacity	0.02	0.01	0.00			
Queue Length 95th (ft)	2	0	0			
Control Delay (s)	8.8	0.0	0.0			
Lane LOS	A					
Approach Delay (s)	8.8	0.0	0.0			
Approach LOS	A					
Intersection Summary						
Average Delay		3.0				
Intersection Capacity Utilization		16.7%		ICU Level of Service		A
Analysis Period (min)		15				





# Traffic Impact Report

1165R Mass Ave Apartments  
1165R Massachusetts Avenue  
Arlington, MA

July 6, 2020

Prepared for:

1165R Mass MA Property LLC  
c/o Spaulding & Slye Investments  
One Post Office Square, 28<sup>th</sup> Floor  
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## 1 Introduction

Nitsch Engineering has prepared this Traffic Impact Report (TIR) for the proposed 1165R Mass Ave Apartments (“Project”), a building renovation and expansion project that will include an apartment complex with structured parking in the Mirak Innovation Park, located at 1165R Massachusetts Avenue in Arlington, Massachusetts. This TIR will review existing roadway conditions, access/egress, crash data, and traffic volumes, and it will analyze existing and future conditions at intersections in the study area to establish the impact the proposed improvements would have on traffic operations.

Figure 1 shows the Locus Map and Figure 2 shows the existing site and study area.

### 1.1 Existing Site

The proposed Project is located within the Mirak Innovation Park at 1165R Massachusetts Avenue in Arlington, Massachusetts. The Mirak Innovation Park is bounded by Massachusetts Avenue to the south, Quinn Road (Mirak Innovation Park East Driveway) to the east, the Minuteman Commuter Bikeway to the north, Forest Street to the southwest, and Ryder Street to the west. Mill Brook passes through the Innovation Park from west to east.

The site is located adjacent to the 2-story Workbar building, located at 1167 Massachusetts Avenue. Adjacent to Workbar is a 3-story building (“southeast building”), and north of Mill Brook is a 4-story mill building with a one-story building annexed to it. The Workbar and the existing 3-story building are bisected by a 12-foot wide reinforced concrete bridge over Mill Brook, which provides one (1) 9-foot bi-directional travel lane for access to the rear parking lots. All access to and egress from the Innovation Park is provided via Quinn Road, an Innovation Park driveway off Massachusetts Avenue (“West Driveway”), and a driveway off Ryder Street. In addition to Workbar, the two other main abutters are the Mirak Hyundai Car Dealership and the Robert Annese Law Office. Both uses were granted an easement to use the West Driveway access for all egress and ingress.

Seventy-six parking spaces are provided for Workbar and mill Building tenants behind the existing Workbar building, as indicated on the site survey conducted by Control Point Associates, dated November 13, 2019. An additional 48 parking spaces behind the Mirak Chevrolet are also provided for tenants via a short-term lease agreement.


### 1.2 Proposed Development

Based on the current Site Plan, the proponent proposes to demolish the 3-story building east of Workbar and the 1-story annex building to the north of Mill Brook to develop two (2) new buildings and renovate two (2) existing buildings. The Project will consist of three (3) apartment buildings with 130 dwelling units and one (1) building for amenity space. Table 1 presents the current plan for the Apartment Mix.

**Table 1 – Apartment Mix**

Type	Percent Mix	Number of Units	Number of Bedrooms
Studio	24%	31	31
1-Bedroom	42%	55	55
2-Bedroom	24%	31	62
3-Bedroom	10%	13	39
<b>Total</b>	<b>100%</b>	<b>130</b>	<b>187</b>





Existing surface parking behind Workbar will be eliminated. However, 124 new parking spaces will be provided in the garages of Buildings #2 and #4, and 12 surface parking spaces will be provided. An agreement has been established to allow Workbar tenants to occupy 40 parking spaces during weekday business hours and 10 parking spaces at night and on weekends.

To accommodate two-way vehicular traffic and pedestrian traffic from Massachusetts Avenue to the north of Mill Brook, the bridge will have to be reconstructed to include two (2) 10.5-foot travel lanes and a minimum 4-foot wide sidewalk. The project team has employed a structural engineering team to assess the existing bridge conditions and to design a new bridge that will accommodate daily traffic as well as emergency vehicles.

### 1.3 Study Area

The study area includes the Mirak Innovation Park site, 12 adjacent roadway segments, and seven (7) intersections.

#### **Roadways**

- Massachusetts Avenue;
- Forest Street;
- Peirce Street;
- Ryder Street;
- Appleton Street;
- Appleton Place;
- Burton Street;
- Pine Court;
- Quinn Road (Mirak Innovation Park East Driveway);
- Mirak Innovation Park West Driveway;
- Quinn Access Road; and
- Mirak Innovation Park Ryder Street Driveway.

#### **Intersections**


- Massachusetts Avenue and Appleton Street/Appleton Place/Commercial Driveway;
- Massachusetts Avenue and Forest Street/Burton Street/Mirak Innovation Park West Driveway;
- Massachusetts Avenue and Pine Court;
- Massachusetts Avenue and Quinn Road (Mirak Innovation Park East Driveway);
- Mirak Innovation Park West Driveway and Quinn Access Road;
- Forest Street and Ryder Street/Peirce Street; and
- Ryder Street and Mirak Innovation Park Ryder Street Driveway.

### 1.4 Methodology

The traffic analysis herein summarizes the following:

1. A data collection of existing transportation conditions, including traffic data, crash history, roadway capacities, parking, transit, pedestrian and bicycle circulation, loading, and site conditions.



- 
2. An evaluation of future transportation conditions and an assessment of potential traffic impacts associated with the Project and other neighboring projects. Long-term impacts are evaluated for the year 2025, based on a five-year horizon from the 2020 base year. Expected roadway, parking, transit, pedestrian, and loading conditions and deficiencies are identified. This section includes the following scenarios:
    - a. The No-Build Scenario (2025), which includes general background growth and additional vehicular traffic associated with specific proposed or planned developments and roadway changes in the vicinity of the Project site; and
    - b. The Build Scenario (2025), which also includes specific travel demand forecasts associated with the Project.
  3. An evaluation of crash data and traffic volumes to determine if a traffic signal is warranted at any of the study intersections
  4. An identification of appropriate measures to mitigate Project-related impacts identified in the previous phase.
  5. An evaluation of short-term traffic impacts associated with construction activities.





**Figure 1: Locus Map**  
1165R Mass Ave Apartments  
Arlington, MA  
Data Source: MassGIS  
Nitsch Project #13990.





**Figure 2: Existing Site and Study Area**

1165R Mass Ave Apartments

Arlington, MA

Data Source: MassGIS  
Nitsch Project #: 13990.





## 2 Existing Conditions

### 2.1 Roadways

#### ***Massachusetts Avenue***

Massachusetts Avenue, colloquially referred to as Mass Ave, is a two-lane principal arterial roadway under Town of Arlington jurisdiction that stretches for 16 miles from the Dorchester neighborhood of Boston northwest to Minuteman Park in Lexington. Near the site, Massachusetts Avenue runs generally east-west with one lane in each direction, each approximately 14 feet wide, separated by a double-yellow center line. The sidewalks along both sides of the roadway are in good condition. Two-hour parking is provided on both sides of the roadway via 8-foot wide parking lanes, and shared bicycle pavement markings (“sharrows”) are provided in both directions in the vehicular travel lanes. The posted speed limit along Massachusetts Avenue in the site vicinity is 30 miles per hour (mph). There are two (2) Massachusetts Bay Transportation Authority (MBTA) bus stops in the site vicinity, one in each direction, that service the MBTA’s 77 and 79 bus routes.

#### ***Forest Street***

Forest Street is a two-lane local roadway under Town of Arlington jurisdiction that runs in the general north-south direction from its northern terminus at Summer Street approximately a quarter mile to its southern terminus at Massachusetts Avenue. Near the site, Forest Street is 22 feet wide with no lane markings. Asphalt sidewalks are present on both side of the roadway, and on-street parking is restricted near the site. The speed limit is not posted along the roadway.

#### ***Peirce Street***

Peirce Street is a two-lane local roadway under Town of Arlington jurisdiction that runs in the east-west direction from its western terminus at Locke Street approximately 0.15 miles to its eastern terminus as Forest Street. Near the site, Peirce Street is 22 feet wide with no lane markings. Concrete sidewalks with grass buffers are present and parking is allowed on both sides of the roadway. The speed limit is not posted along the roadway.


#### ***Ryder Street***

Ryder Street is a two-lane private way, half of which is under ownership of the Project, from Forest Street to the site driveway. Ryder Street runs in the northeast-southwest direction from its southwestern terminus at Forest Street at Mill Brook to its northeastern terminus at the Minuteman Commuter Bikeway. Adjacent to the Ryder Street Driveway, Ryder Street is only 20 feet wide, though parking is not restricted on either side of the roadway. Asphalt sidewalk is provided only on the east side on the Ryder Street Bridge over Mill Brook, and no pavement markings are present along the roadway. The speed limit is not posted along the roadway.

#### ***Appleton Street***

Appleton Street is a two-lane major collector roadway under Town of Arlington jurisdiction that runs in the northeast-southwest direction that connects Massachusetts Avenue, at its northeastern terminus, to Concord Avenue (Route 2) at its southwestern terminus. At its intersection with Massachusetts Avenue, the roadway provides one lane with marked shoulder in each direction, each lane approximately 12 feet wide, separated by a double-yellow center line. Centerline markings and shoulder makings are present from Massachusetts Avenue to Acton Street, about





200 feet to the west. Concrete sidewalks with grass buffers are present on both sides of the roadway. Although the marked shoulders are not wide enough for standard vehicles to park, parking is not restricted along the roadway. The speed limit is not posted along the roadway.

### ***Appleton Place***

Appleton Place is a two-lane local roadway under Town of Arlington jurisdiction that runs in the general northwest-southeast direction that connects Massachusetts Avenue at its northwestern terminus to Quincy Road approximately a quarter mile to the southeast. The road is 22 feet wide with no lane markings. Concrete sidewalks are present on both sides of the roadway, and parking is not restricted on the southeast-bound side of the road. The speed limit is not posted along the roadway.

### ***Burton Street***

Burton Street is a two-lane local roadway under Town of Arlington jurisdiction that runs in the north-south direction from its northern terminus at Massachusetts Avenue approximately three-quarters of a mile to its southern terminus at Appleton Place. The road is 22 feet wide with no lane markings. Concrete sidewalks with grass buffer strips are present and parking is not restricted on both sides of the roadway. The speed limit is not posted along the roadway.

### ***Pine Court***

Pine Court is a narrow privately owned local roadway that runs in the north-south direction from its northern terminus at Massachusetts Avenue approximately three-quarters of a mile to its southern terminus at Appleton Place. Although the road is narrow, parking is not restricted. Sidewalks are not provided on either side of the roadway; and the pavement is in poor condition and in need of repairs. The speed limit is not posted along the roadway.

### ***Quinn Road***

Quinn Road is two-way privately owned local roadway that runs in the north-south direction. The road serves as a driveway entrance to the Mirak Innovation Park next to the Mirak Chevrolet service center. At its intersection with Massachusetts Avenue, the road is approximately 30 feet with no lane markings and no sidewalks. The speed limit is not posted along the roadway.

### ***Mirak Innovation Park West Driveway***

Mirak Innovation Park West Driveway is private and under ownership of the Project proponent. The driveway runs in the north-south direction, connecting Massachusetts Avenue to the Workbar/Mirak Mill parking lot over the Mill Brook bridge. The driveway is approximately 20 feet wide with no lane markings and no sidewalks.

### ***Quinn Access Road***

Quinn Access Road is a privately owned roadway that runs parallel to Massachusetts Avenue in the east-west direction, connecting the Mirak Innovation Park West Driveway to Quinn Road south of Mill Brook. The road also serves as access to three small paved surface parking lots that are used by Mirak dealership employees. The speed limit is not posted along the roadway.





### ***Mirak Innovation Park Ryder Street Driveway***

Mirak Innovation Park Ryder Street Driveway is privately owned and runs in the east-west direction from Ryder Street to the Mirak Mill Park West Driveway north of Mill Brook. The driveway provides direct access to the existing surface parking space located to the north of Workbar.

## **2.2 Study Intersections**

### ***Massachusetts Avenue and Appleton Street/Appleton Place/Commercial Driveway***

Massachusetts Avenue intersects with Appleton Street, Appleton Place, and a commercial driveway to form a five-legged intersection, with the Massachusetts Avenue approaches operating freely, and the Appleton Street and Appleton Place under stop control. The Massachusetts Avenue eastbound and westbound approaches consist of one full-movement lane with adjacent on-street parking in each direction. The Appleton Street northeast-bound approach and the Appleton Place northbound approach each consist of one full-movement lane with stop signs and stop bars present. The commercial driveway southbound approach consists of one full-movement lane with no stop signs or stop bars present. Bus stops for the MBTA Bus Routes 77 and 79 are located at the Massachusetts Avenue eastbound approach. Ladder-style painted crosswalks are present at the westbound and northbound approaches accompanied by wheelchair ramps with detectable warning panels at each corner. Traffic signals are present at each corner of the intersection and flash yellow to warn motorists to proceed with caution. However, the intersection effectively operates as an unsignalized intersection.

### ***Massachusetts Avenue and Forest Street/Burton Street/Mirak Innovation Park West Driveway***

Massachusetts Avenue intersects with Forest Street, Burton Street, and the Mirak Innovation Park West Driveway to form a five-legged unsignalized intersection, with the two Massachusetts Avenue approaches operating freely, and the Forest Street, Burton Street, and West Driveway approaches under stop control. The Massachusetts Avenue eastbound and westbound approaches consist of one 14-foot wide full-movement lane with adjacent on-street parking in each direction. The Burton Street northbound approach consists of one full-movement lane with a stop sign and stop bar present and no posted parking restrictions. The Forest Street southeast-bound approach consists of one full-movement lane with parking restricted on both sides of the roadway and a stop sign and stop bar present. The West Driveway southbound approach provides one lane in each direction, though there are no pavement markings present. Ladder-style painted crosswalks are present at the eastbound, northbound, and southbound approaches, accompanied by wheelchair ramps with detectable warning panels at each corner.

### ***Massachusetts Avenue and Pine Court***

Massachusetts Avenue intersects with Pine Court to form a three-legged unsignalized intersection, with the Massachusetts Avenue approaches operating freely, and the Pine Court approach under stop control. The Massachusetts Avenue eastbound and westbound approaches consist of one full-movement lane with adjacent on-street parking in each direction. The Pine Court northbound approach consists of one full-movement lane; however, there is no stop sign, yield sign, or stop bar present. A ladder-style painted crosswalk is present at the Pine Court approach accompanied by wheelchair ramps with detectable warning panels at each corner.





### ***Massachusetts Avenue and Quinn Road (Mirak Innovation Park East Driveway)***

Massachusetts Avenue intersects with Quinn Road to form a three-legged unsignalized intersection, with the Massachusetts Avenue approaches operating freely, and the Quinn Road approach under stop control. The Massachusetts Avenue eastbound and westbound approaches consist of one full-movement lane with adjacent on-street parking in each direction. The Quinn Road southbound approach consists of one full-movement lane with a stop sign and stop bar. The stop sign for the southbound approach is attached to a utility pole on the left side of the approach. A ladder-style painted crosswalk is present at the Quinn Road approach accompanied by wheelchair ramps with detectable warning panels at each corner.

### ***Mirak Innovation Park West Driveway and Quinn Access Road***

The West Driveway intersects with Quinn Access Road to form a three-legged unsignalized intersection, with the West Driveway approaches operating freely and the Quinn Access Road westbound approach terminating at the West Driveway. The West Driveway and Quinn Access Road approaches consist of one full-movement lane in each direction with no stop signs or stop bars present.

### ***Forest Street and Ryder Street/Peirce Street***

Forest Street intersects with Peirce Street and Ryder Street to form a four-legged unsignalized intersection, with the Forest Street approaches operating freely, and the Ryder Street and Peirce Street approaches under stop control. The Forest Street northbound and southbound approaches consist of one full-movement lane with adjacent on-street parking in each direction. The Peirce Street eastbound approach consists of one full-movement lane with a stop sign and stop bar. The Ryder Street westbound approach, offset slightly to the south relative to Peirce Street, consists of one full-movement lane; however there is no stop sign, yield sign, or stop bar present. A ladder-style painted crosswalk is present at the Peirce Street approach accompanied by wheelchair ramps with detectable warning panels at each corner.

### ***Ryder Street and Mirak Innovation Park Ryder Street Driveway***

Ryder Street intersects with Mirak Mill Ryder Street Driveway to form a three-legged unsignalized intersection, with the Ryder Street approaches operating freely and the driveway westbound approach under stop control. The Ryder Street eastbound and westbound approaches consist of one full-movement lane with adjacent on-street parking in each direction. The Ryder Street Driveway approach consists of one full-movement lane with no stop signs or stop bars present.

## **2.3 Public Transportation**


### ***Subway***

Alewife Station is located about 3.5 miles southeast of the study area at the intersection of Concord Turnpike and Alewife Brook Parkway in Cambridge. The station is the northern terminus of the MBTA's Red Line, which provides direct access to Downtown Boston and other cities, including Somerville, Quincy, and Braintree.

### ***Bus***

MBTA bus services are available near the site. MBTA Bus Route 67, connecting Alewife Station and Turkey Hill, runs along Summer Street. The closest stops for Route 67 traveling to Alewife are located on the south side of





Summer Street about 125 feet east of Forest Street and at the intersection of Washington Street and Summer Street. Bus Route 67 coming from Alewife to Turkey Hill stops at the intersection of Summer Street and Washington Street and then travels along Washington Street to Lawrence Lane. MBTA Bus Routes 77 and 79 run along Massachusetts Avenue near the site. Route 77 connects between Arlington Heights and Harvard Square, and Route 79 connects between Arlington Heights and Alewife Station. The closest designated stops for both inbound and outbound directions for these routes are located at the intersection of Massachusetts Avenue and Appleton Street/Appleton Place and at the intersection of Massachusetts Avenue and Quincy Street. Routes 67 and 79 provide direct access to Alewife Station, and Route 77 provides access to East Arlington, Somerville, and Cambridge.

## **2.4 Bicycle Facilities**

The Minuteman Commuter Bikeway, a 10-mile long paved trail connecting Bedford to Alewife Station, passes near the north boundary of the Mirak Innovation Park, running parallel to Massachusetts Avenue. The length of the bikeway from Ryder Street to Alewife Station is about 3.5 miles, making it a useful non-motorized commuting option. Access to the Bikeway is provided at the north end of Ryder Street, making it easily accessible from the proposed site. Massachusetts Avenue has shared lanes with Sharrows in both directions of travel, and Appleton Street has paved shoulders in both directions that can be used by bicyclists. Shared or dedicated bicycle lanes are not present on the rest the town-owned or private roadways in the project area, though motorized volumes are comparatively low on those roads. A dockless bike-sharing program was being operated in the town until the end of 2019.

## **2.5 Pedestrian Mobility**

Sidewalks are present on both sides of Massachusetts Avenue, Forest Street, Appleton Street, Appleton Place, and Burton Street, providing ample opportunity for pedestrian mobility. Crosswalks are present at the intersection of Forest Street and Ryder Street/Peirce Street and at all intersections along Massachusetts Avenue. On-site sidewalks are not currently present on the West Driveway from Massachusetts Avenue or on the Ryder Street Driveway from Ryder Street.

# **3 Existing Traffic Conditions**

## **3.1 Traffic Count Data**

Nitsch Engineering retained Precision Data Industries, Inc. (PDI) of Framingham, Massachusetts to collect traffic data within the study area, including both Automatic Traffic Recorder (ATR) counts and Turning Movement Counts (TMCs).

### ***ATR Data***

PDI collected ATR counts for a continuous 48-hour period at five locations from Tuesday, February 4, 2020 to Wednesday, February 5, 2020. The ATR data with seasonal adjustments per Section 3.2 are summarized in Table 2. The ATR data is included in Appendix A.



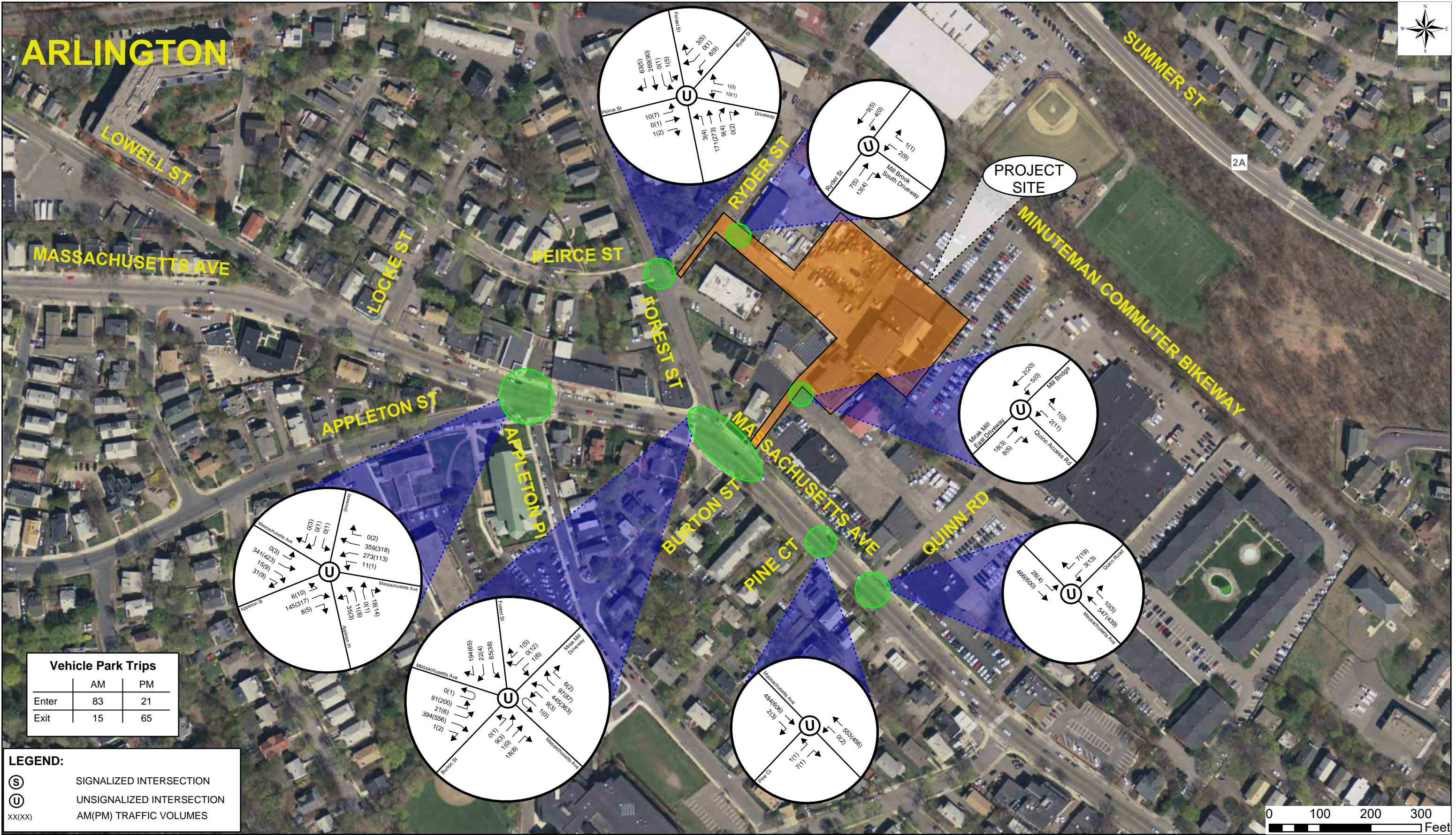
**Table 2 – Automatic Traffic Recorder (ATR) Summary**

Location	Period	ADT <sup>a</sup>			Peak Hour Traffic				K Factor <sup>d</sup>
		Volumes (vpd) <sup>b</sup>	Directional Distribution		Period	Volumes (vph) <sup>c</sup>	Directional Distribution		
Massachusetts Avenue, between Burton Road and Pine Court	Weekday	13,127	51%	EB	Morning	1,052	53%	WB	0.08
					Afternoon	1,051	57%	EB	0.08
Mirak Mill Park West Driveway, north of Massachusetts Avenue	Weekday	464	53%	NB	Morning	48	85%	NB	0.10
					Afternoon	41	77%	SB	0.09
Quinn Road, north of Massachusetts Avenue	Weekday	546	50%	SB	Morning	56	57%	NB	0.10
					Afternoon	41	77%	SB	0.07
Forest Street, north of Massachusetts Avenue	Weekday	4,042	56%	NB	Morning	480	61%	SB	0.12
					Afternoon	425	71%	NB	0.11
Burton Road, south of Massachusetts Avenue	Weekday	548	65%	SB	Morning	69	51%	SB	0.13
					Afternoon	23	57%	NB	0.04
<sup>a</sup> Average Daily Traffic; <sup>b</sup> Vehicles per day; <sup>c</sup> Vehicles per hour; <sup>d</sup> Proportion of daily traffic NB = Northbound, SB = Southbound, EB = Eastbound, WB = Westbound									

### **TMC Data**

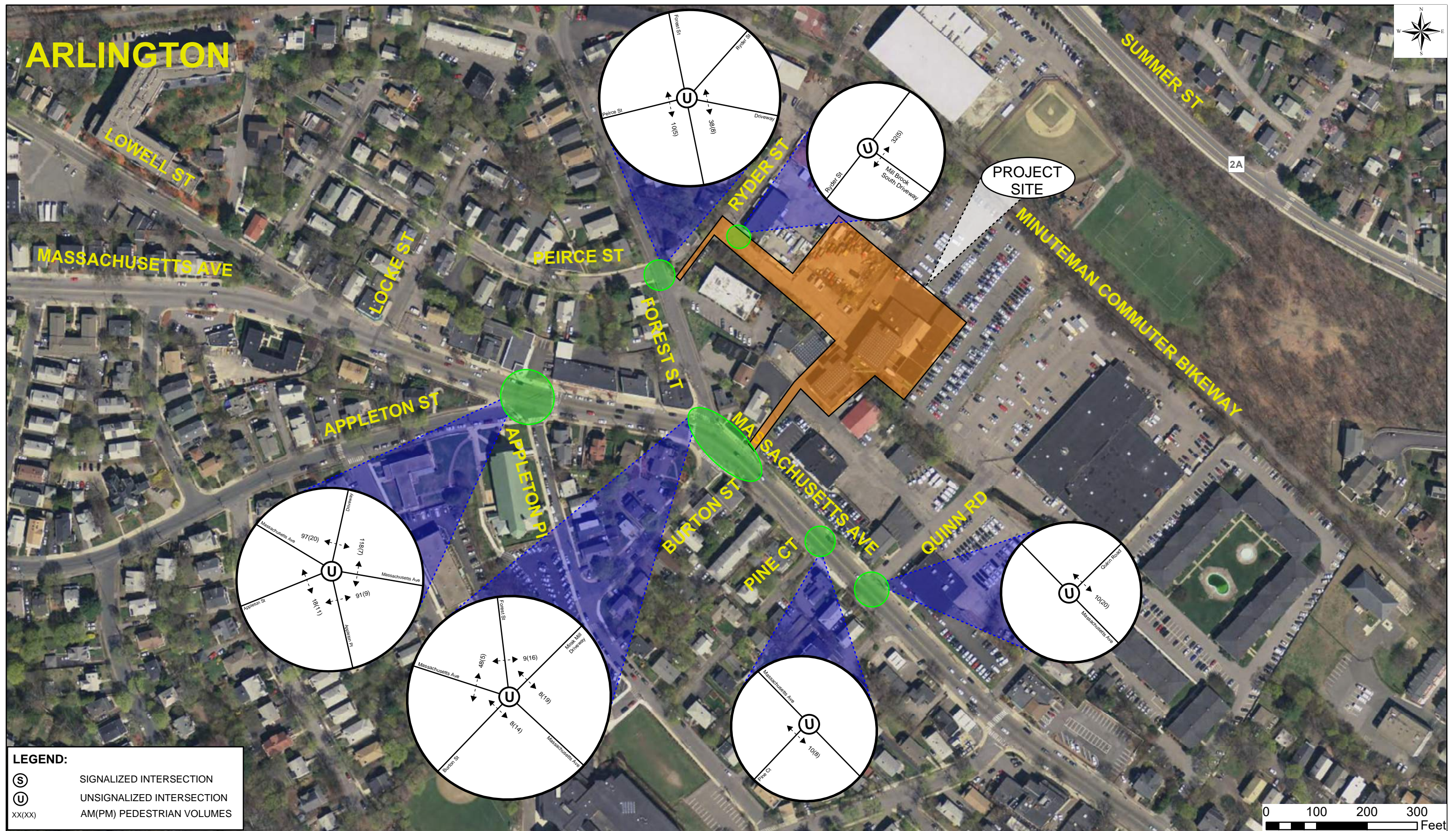
PDI collected TMC data at the seven (7) study intersections on Tuesday, February 4, 2020. TMC data was recorded from 7:00 AM to 9:00 AM to capture the weekday morning traffic peak hours and from 4:00 PM to 6:00 PM to capture the weekday evening traffic peak hours. The counts included passenger vehicles, heavy vehicles, bicycles, and pedestrians. The existing peak-hour traffic volumes at these intersections in the form of turning movements, seasonally adjusted per Section 3.2, are shown in Figure 3. The pedestrian existing peak-hour volumes are shown on Figure 4. The TMC data is included in Appendix A.





**Figure 3: 2020 Existing Peak Hour Volumes**  
 1165R Mass Ave Apartments  
 Arlington, MA  
 Data Source: MassGIS  
 Nitsch Project #13990.





**Figure 4: 2020 Existing Pedestrian Peak Hour Volumes**

1165R Mass Ave Apartments

Arlington, MA

Data Source: MassGIS

Nitsch Project #13990.





### 3.2 Seasonal Adjustment

Nitsch Engineering queried MassDOT traffic data for counts nearby that would establish a seasonal adjustment for the volumes we measured in May and June. No local data was available, so Nitsch Engineering used MassDOT's 2019 Weekday Seasonal Adjustment Factors.

Massachusetts Avenue falls within Group U3 – “Urban Other Principal Arterial.” Forest Street, Appleton Street, and Appleton Place fall within U5 – “Urban Major Collector.” Peirce Street, Ryder Street, Burton Street, Quinn Road, and Pine Court fall within U7 – “Urban Local Road.” The seasonal factors for counts within Group U3 for the month of February is 1.03, indicating that traffic volumes are 3% lower than average. For Groups U5 and U7, the seasonal factor for February is 1.00, indicating that it represents an average month. To present a conservative approach, we increased the counted volumes on all Massachusetts Avenue approaches by 3%, and we did not adjust the volumes on the approaches of all other roadways. Traffic volumes in Table 2 and Figure 3 reflect the seasonal adjustment. MassDOT's 2019 Weekday Seasonal Factors are included in Appendix B.

### 3.3 Parking Utilization Assessment

#### **Site Utilization**

As the Project will be eliminating most of the parking lot behind Workbar, the Proponent has agreed to provide enough garage parking to reserve 40 weekday spaces and 10 evening and weekend spaces for Workbar tenants. Therefore, Nitsch Engineering conducted a parking utilization assessment to determine the existing demand for Workbar tenants and determine if the agreed-upon allotted spaces would provide enough capacity. The parking lots allocated for Workbar and Mill building tenant parking were counted on Wednesday, January 29 from 6:00 PM to 8:00 PM, on Thursday, January 30 from 6:00 AM to 8:00 AM and from 12:00 PM to 2:00 PM, and on Saturday, February 1 from 9:00 AM to 11:00 AM. Standard methodology for determining parking generation is to use the Institute of Transportation Engineers' (ITE) *Parking Generation, 10<sup>th</sup> Edition*<sup>1</sup> (“the ITE method”). Per ITE these count periods represent the peak and off-peak hours for a typical residential development during the weekday; and the combined overlapping peak hours for an office and residential development on a Saturday.

The parking utilization assessment summary is shown in Table 3.

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<sup>1</sup> *Trip Generation*, Institute of Transportation Engineers, 10th Edition, 2016, Washington, D.C.



**Table 3 – Site Parking Utilization Assessment Summary**

Day and Time		Occupied Spaces	Maximum Utilization %
Weekday Morning	6:00 AM - 6:30 AM	1	4%
	6:30 AM - 7:00 AM	1	
	7:00 AM - 7:30 AM	3	
	7:30 AM - 8:00 AM	3	
Weekday Midday	12:00 PM - 12:30 PM	43	68%
	12:30 PM - 1:00 PM	52	
	1:00 PM - 1:30 PM	47	
	1:30 PM - 2:00 PM	45	
Weekday Evening	6:00 PM - 6:30 PM	5	7%
	6:30 PM - 7:00 PM	3	
	7:00 PM - 7:30 PM	4	
	7:30 PM - 8:00 PM	4	
Saturday Mid-morning	9:00 AM - 9:30 AM	3	5%
	9:30 AM - 10:00 AM	4	
	10:00 AM - 10:30 AM	4	
	10:30 AM - 11:00 AM	4	

Table 3 shows that during the weekday, the maximum utilization rate for the Workbar and mill building tenants is lowest in the morning and highest in the midday period. During the weekday, the highest number of spaces occupied during midday was 52. As this number represents the occupancy for the combined uses, it is necessary to determine the portion that is allocated to just the Workbar tenants.

We used ITE Parking Land Use Code (LUC) 710 – “General Office Building.” For an office building (the mill building) comprising approximately 17,000 square feet, the ITE estimated number of occupied parking spaces for the peak midday would be 41. Based on the Town of Arlington 2015 Master Plan, the mode share for this location is 67% vehicles (detailed below in Section 7.2). Therefore, the Mill building is estimated to generate 28 occupied parking spaces at the peak midday period.

From this data, we can conclude that Workbar tenants occupied 24 parking spaces during the peak utilization period. Therefore, the 40 parking spaces for during the weekday and 10 spaces on Saturday that will be provided for Workbar should be enough.

### **Comparable Developments**

In addition to the site utilization, Nitsch Engineering conducted parking utilization counts at three (3) nearby apartment complexes to determine the parking utilization at similar residential transit-oriented developments in Arlington to determine the future parking required at the site (described in Section 7.6). The following developments were counted:



- Brigham Square Apartments at 30 Mill Street on January 29, 2020 from 6:00 AM to 8:00 AM, on January 30, 2020 from 6:00 PM to 8:00 PM, and on February 1, 2020 from 9:00 AM to 11:00 AM;
- Arlington 360 at 4205 Symmes Circle on January 30, 2020 from 12:00 PM to 2:00 PM; and
- The Legacy at Arlington Center at 438 Massachusetts Avenue on February 1, 2020 from 9:00 AM to 2:00 PM.

Table 4 summarizes the parking count data at nearby apartment complexes.

**Table 4 – Apartment Complex Parking Utilization Assessment Summary**

	Location			Average
	The Legacy at Arlington Center	Brigham Square Apartments	Arlington 360	
Total parking spaces	155	153	284	
Number of Bedrooms	247	179	241	
Peak Parking Observed	83	99	182	
<b>Peak Parking Utilization (spaces/bd)</b>	<b>0.34</b>	<b>0.55</b>	<b>0.76</b>	<b>0.55</b>

To determine the future anticipated resident parking (described in Section 7.6) throughout the day, we calculated the average parking lot utilization reduction during the weekday midday and Saturday mid-morning periods which represent the peak Workbar utilization periods. This data will be used to determine if there will be a significant reduction in resident parking to accommodate the Workbar parking. Our calculations indicated there was an average 15% parking reduction during the weekday midday period and an average 2% reduction during the Saturday mid-morning period.



## 4 Safety Analysis

### 4.1 Historical Data

We researched the crash data within the study area for the three (3) most recent years available from the MassDOT records, 2017 to 2019. Table 5 summarizes the crash statistics for the seven study intersections.

**Table 5 – Crash Statistics**

Location	Number of Crashes			Severity				Manner of Collision				Incl. Ped/ Bike <sup>i</sup>	Percent During	
	Year	Total Crashes	Annual Average	PD <sup>a</sup>	PI <sup>b</sup>	NR <sup>c</sup>	F <sup>d</sup>	A <sup>e</sup>	RE <sup>f</sup>	HO <sup>g</sup>	Other <sup>h</sup>		Peak Hours <sup>k</sup>	Wet/Icy Conditions
Massachusetts Avenue and Appleton Street/ Appleton Place/ Commercial Driveway	2017	4	3.3	4				2	2				0%	50%
	2018	0												
	2019	6		5		1		3	3				33%	50%
	<b>Total</b>	<b>10</b>		<b>9</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>5</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>20%</b>	<b>50%</b>
Massachusetts Avenue and Forest Street/ Burton Street/ West Driveway	2017	2	3.3			2			2				0%	0%
	2018	0												
	2019	8		7	1			4	3		1		38%	38%
	<b>Total</b>	<b>10</b>		<b>7</b>	<b>1</b>	<b>2</b>	<b>0</b>	<b>4</b>	<b>5</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>30%</b>	<b>30%</b>
Massachusetts Avenue and Pine Court	2017	0	0.7											
	2018	2			2			2					100%	100%
	2019	0												
	<b>Total</b>	<b>2</b>		<b>0</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>100%</b>	<b>100%</b>
Massachusetts Avenue and Quinn Road	2017	0	0.0											
	2018	0												
	2019	0												
	<b>Total</b>	<b>0</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0%</b>	<b>0%</b>
West Driveway and Quinn Access Road	2017	0	0.0											
	2018	0												
	2019	0												
	<b>Total</b>	<b>0</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0%</b>	<b>0%</b>
Forest Street and Ryder Street/ Peirce Street	2017	4	4.0	4				2	2				0%	50%
	2018	2		2				2					0%	0%
	2019	6		5		1		3	3				33%	50%
	<b>Total</b>	<b>12</b>		<b>11</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>7</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>17%</b>	<b>42%</b>
Ryder Street and Ryder Street Driveway	2017	0	0.0											
	2018	0												
	2019	0												
	<b>Total</b>	<b>0</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0%</b>	<b>0%</b>

<sup>a</sup>Property Damage Only; <sup>b</sup>Personal Injury Only (non-Fatal Injury); <sup>c</sup>Not Reported; <sup>d</sup>Fatality; <sup>e</sup>Angle; <sup>f</sup>Rear-end; <sup>g</sup>Head-on; <sup>h</sup>Sideswipe, opposite direction; sideswipe, same direction, single vehicle crash, rear-to-rear, not reported, unknown, etc.; <sup>i</sup>Includes pedestrian or cyclist; <sup>k</sup>Occurred between 7-9am or 4-6pm



A total of 34 crashes were reported within the study area from 2017 to 2019. There were no reported crashes at the intersections of Massachusetts Avenue and Quinn Road, Mirak Innovation Park West Driveway and Quinn Access Road, and Ryder Street and Mirak Innovation Park Ryder Street Driveway during the study period. In terms of severity, three (3) crashes in the study area reported personal injury, and there were no crashes with fatalities. Angle crashes were the most frequent type of crash with a total of 18 crashes, and of the remaining crashes, 15 were rear-end and one (1) was a single vehicle crash. No crashes involving pedestrians or bicycles were reported. Twenty-six percent of all crashes in the study area occurred during peak hours, and 44% of all crashes occurred under wet/icy conditions.

Crash rates for intersections are expressed by the number of crashes per million entering vehicles (MEV). Table 6 compares the crash rates for the study intersections with the Statewide and District 4 averages. The intersection crash rate calculations are included in Appendix C.

**Table 6 – Crash Rate Summary**

Location	Facility Type	Number of Crashes <sup>a</sup>	Crash Rate <sup>b</sup>	Average Rates <sup>b,c</sup>		Comparison to Average Rates	
				District 4	Statewide	District 4	Statewide
Massachusetts Avenue and Appleton Street/Appleton Place/Commercial Driveway	Unsignalized Intersection	10	0.60	0.57	0.57	Slightly Above	Slightly Above
Massachusetts Avenue and Forest Street/Burton Street/West Driveway	Unsignalized Intersection	10	0.54	0.57	0.57	Slightly Below	Slightly Below
Massachusetts Avenue and Pine Court	Unsignalized Intersection	2	0.14	0.57	0.57	Below	Below
Massachusetts Avenue and Quinn Road	Unsignalized Intersection	0	0.00	0.57	0.57	Below	Below
West Driveway and Quinn Access Road	Unsignalized Intersection	0	0.00	0.57	0.57	Below	Below
Forest Street and Ryder Street/Peirce Street	Unsignalized Intersection	12	1.59	0.57	0.57	Above	Above
Ryder Street and Ryder Street Driveway	Unsignalized Intersection	0	0.00	0.57	0.57	Below	Below
<sup>a</sup> Based on 3-year crash history from MassDOT, 2014-2016 <sup>b</sup> Intersections: Crashes per million entering vehicles (MEV), <sup>c</sup> Based on latest MassDOT crash data queried June 2018							

Crash rates at four (4) of the study intersections are all well below the District 4 and Statewide averages. The crash rates for the intersection of Massachusetts Avenue and Appleton Street/Appleton Place/Commercial Driveway and the intersection of Massachusetts Avenue and Forest Street/Burton Street/Mirak Innovation Park West Driveway are comparable to the District 4 and Statewide averages, the former being slightly above those averages and the latter being slightly below. The crash rate at the intersection of Forest Street and Ryder Street/Peirce Street is nearly three (3) times the District 4 and Statewide averages.





## 4.2 2020 Crashes

As historical data is only available through 2019, crashes in 2020 were not captured in the Safety Analysis. However, it is important to note that in May 2020, a fatal collision involving a bicyclist occurred at the intersection of Massachusetts Avenue and Appleton Street/Appleton Place and in June 2020, a non-fatal vehicle crash occurred at the intersection of Massachusetts Avenue and Forest Street/Burton Street/West Driveway. While the details of the crashes were not available at the time of this study, it is evident that these locations experience serious safety issues related to bicyclist and motorist conflicts. Intersection geometry, limited on-street bicycle facilities, flashing traffic signal equipment, congestion, and other inhibiting factors could all contribute to the safety issues at these intersections. While the Project is not expected to increase the safety concerns at the study intersections, it is recommended that the Town conduct a further traffic study or Road Safety Audit to determine the appropriate measures to reduce the number of crashes in the Project vicinity.

## 5 Signal Warrant Analysis

We conducted traffic signal warrant analyses for the two (2) unsignalized driveways for Mirak Innovation Park along Massachusetts Avenue to determine whether signalization might be justified. We used the 2020 ATR volumes for Massachusetts Avenue, Forest Street, Burton Street, Mirak Mill Ryder Street Driveway, and Quinn Road to analyze the intersections of Massachusetts Avenue at Forest Street/Burton Street/Mirak Mill Ryder Street Driveway and Massachusetts Avenue at Quinn Road (Mirak Innovation Park East Driveway).


The current MUTCD contains nine (9) traffic signal warrants, at least one of which should be satisfied to justify the installation of a traffic signal at a location. Satisfying one or more warrants, however, does not necessarily require the installation of a traffic signal. The traffic signal warrants are:

- Warrant 1: Eight-Hour Vehicular Volume;
- Warrant 2: Four-Hour Vehicular Volume;
- Warrant 3: Peak Hour;
- Warrant 4: Pedestrian Volume;
- Warrant 5: School Crossing;
- Warrant 6: Coordinated Signal System;
- Warrant 7: Crash Experience;
- Warrant 8: Roadway Network; and
- Warrant 9: Intersection Near a Grade Crossing.

We conducted the signal warrant analysis using the procedures contained in the MUTCD. Not all warrants are applicable to all intersections, and data availability may limit which warrants can be evaluated. For this analysis, we evaluated three warrants: eight-hour vehicular volume, four-hour vehicular volume, and peak hour volume.

Based on our analysis of existing conditions, the intersection of Massachusetts Avenue at Quinn Street did not meet any of the warrants. However, the intersection of Massachusetts Avenue at Forest Street/Burton Street/ West Driveway met all three (3) evaluated warrants. As shown in our Capacity Analysis in Section 8.5, the proposed project does not significantly degrade intersection operations that would warrant the proponent to install a new traffic signal. The Project Team has learned that the Select Board has approved the creation of a design review committee to study both short-term and long-term improvements at the intersection of Appleton Street/Appleton Place and Massachusetts Avenue.





Appendix D includes the signal warrant analysis worksheets.

## **6 Future No-Build Traffic Conditions**

Nitsch Engineering used the 2020 existing traffic volumes as the baseline for projecting traffic volumes to future 2025 No-Build conditions. To determine future 2025 conditions, the following steps are included:

- Project existing 2020 traffic volumes five (5) years in the future to the horizon year (2025) using an annual background traffic growth factor to account for regional growth;
- Add traffic volumes associated with any planned developments that may impact the study area;
- Include any planned roadway improvements that may affect traffic volumes; and
- Analyze the study area location to determine future traffic operations.

### **6.1 Background Growth**

We reviewed the Town of Arlington's 2015 Master Plan to determine an appropriate growth rate to apply to the 2020 existing traffic volumes. As noted in Table 2.1 in Chapter 2 of the Master Plan, the expected growth from 2020 to 2030 is 3.3%, which equates to an annual 0.33% background growth rate. Understanding that development is increasing in the Greater Boston Area, we selected a conservative rate of 2.0% per year to represent regional background growth of traffic in this area. We applied this growth rate over the 5-year design period for the turning movement data.

### **6.2 Additional Development and Planned Roadway Development**

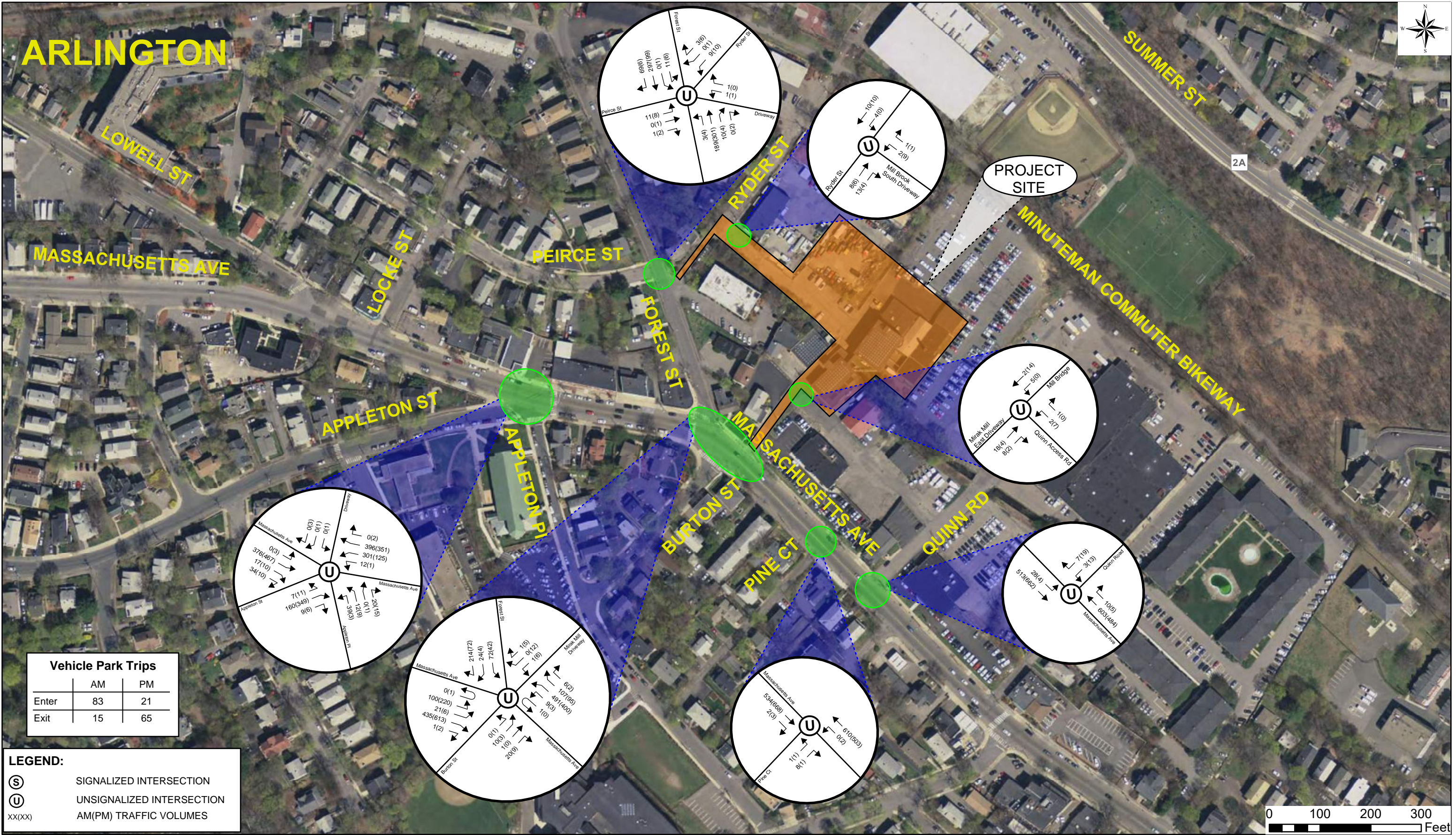
Nitsch Engineering contacted the Town of Arlington Planning Board to establish any planned developments that will potentially add traffic to the study area who indicated that there are no planned developments or roadway projects in the vicinity that would affect our development.

However, in collaboration with the Project team we learned that a 50-unit hotel with ancillary restaurant space will be developed in the vicinity of the Project at 1207 – 1211 Massachusetts Avenue. According to the Traffic Impact Study developed by BSC Group, Inc dated June 2020, the hotel is anticipated to generate an approximate net increase of 18 trips during the weekday morning peak hour and 23 trips during the weekday evening peak hour. For the purposes of the Project Traffic Impact Report, the conservative 2% background growth rate applied to the existing traffic volumes is sufficient to capture the anticipated hotel traffic volume.

### **6.3 2025 No-Build Traffic Volumes**

We developed the 2025 No-Build volumes by the applying annual growth rate for five (5) years to the 2020 Existing traffic volumes at the study intersections. Figure 5 presents the peak hour traffic volumes for 2025 No-Build conditions.





**Figure 5: 2025 No-Build Peak Hour Volumes**  
 1165R Mass Ave Apartments  
 Arlington, MA  
 Data Source: MassGIS  
 Nitsch Project #13990.





## 7 Proposed Future Conditions

### 7.1 Proposed 1165R Mass Ave Apartments Site

The proponent proposes to demolish the 3-story building east of Workbar and the 1-story annex building to the north of Mill Brook to develop two (2) new buildings and renovate two (2) existing buildings. The Project will consist of three (3) apartment buildings with 130 dwelling units and one (1) building for amenity space.

#### ***Vehicle Access and Circulation***

To provide an efficient site circulation and limit the impacts to the abutters, wayfinding signage will be placed at the egress approach to the West Driveway (at the Quinn Access Road) and at the ingress approach to the Ryder Street Driveway. The wayfinding signage will indicate that tenants will have ingress-only provided at the West Driveway and egress-only at the Ryder Street Driveway. However, access at the West Driveway will remain ingress and egress for the two abutters, the Mirak Hyundai car dealership and the Robert Annese Law Office. Similarly, access at the Ryder Street Driveway will remain ingress and egress for all abutters. Access via Quinn Road and the Quinn Access Road will remain two-way for all users. To accommodate two-way traffic and pedestrian traffic from Massachusetts Avenue to the north of Mill Brook, the bridge will have to be reconstructed to include two (2) 10.5-foot travel lanes and a minimum 4-foot wide sidewalk.

#### ***Parking***

Parking will be provided via 14 spaces in the basement-level garage of Building 2 south of Mill Brook, 110 spaces in the two-level garage of Building 4 north of Mill Brook, and surface parking with twelve (12) spaces, totaling 136 proposed parking spaces. Access to the two-level garage will be provided via a two-way driveway on the south side of the building, and access to the basement-level garage will be provided via a two-way driveway on the east side of the reconstructed southeast building. An agreement has been established to allow Workbar tenants to occupy 40 parking spaces during the weekday business hours and 10 parking spaces at night and on the weekends.

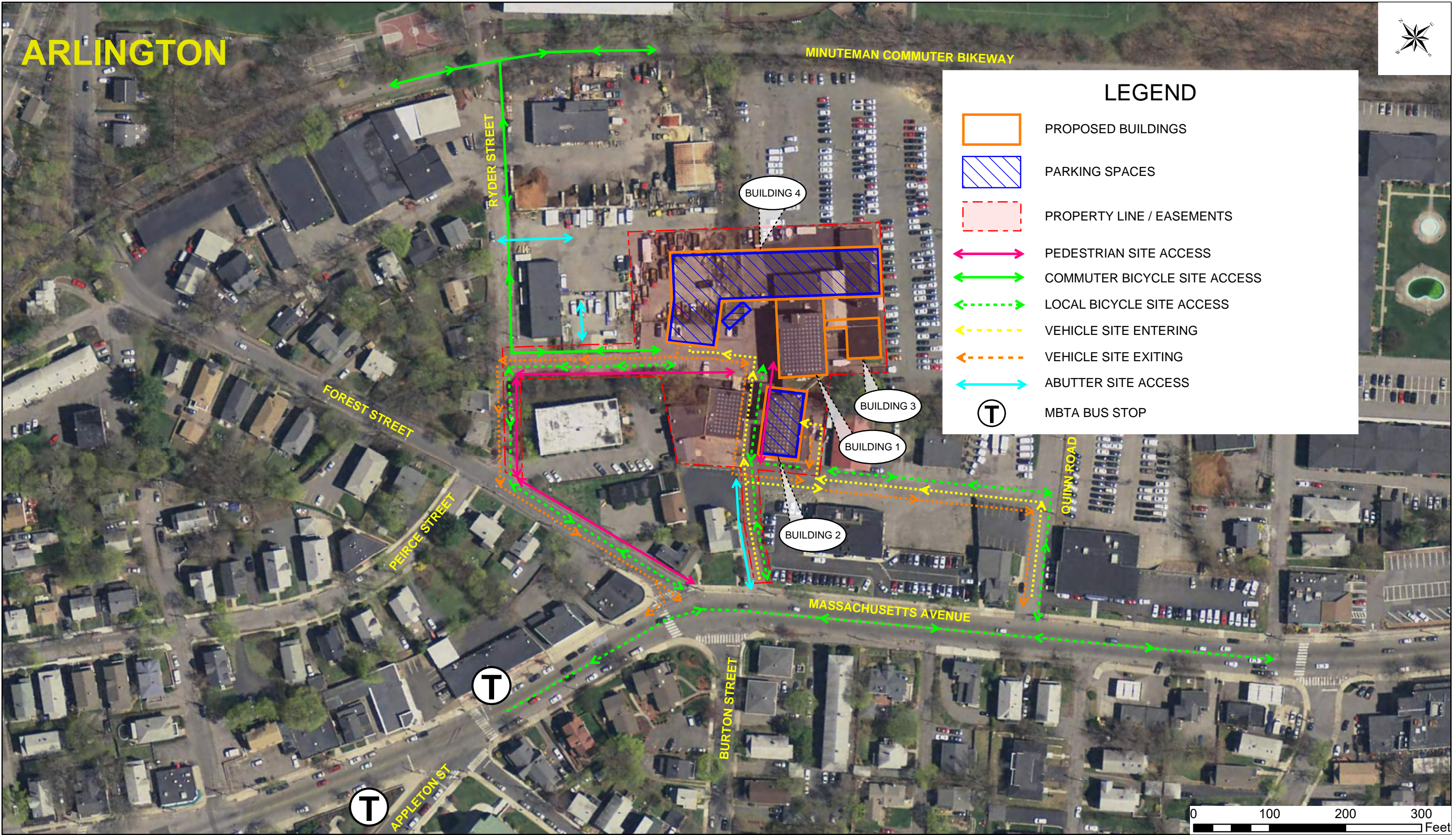
#### ***Pedestrian and Bicycle Accommodations***

Pedestrian and bicycle accommodations and safety are paramount for a successful development in an urban area. The site has been designed to provide a raised pedestrian sidewalk with guardrail along the south side of the Ryder Street Driveway to separate the vehicular traffic from pedestrian traffic and provide sidewalk access to Ryder Street, Forest Street, and Massachusetts Avenue. In addition, the main pedestrian entrance to the building complex is separated from the main parking garage entrance and exit to reduce potential conflicts. The proposed raised sidewalk on the new bridge will also provide a safe pedestrian connection over the Mill Brook.

As the site is adjacent to the Minuteman Commuter Bikeway and shared bicycle lanes on Massachusetts Avenue, it is important that the development provide the adequate bicycle accommodations to support the use of bicycles for residents. The development will provide interior bicycle parking for 100 bicycles with repair and maintenance stations. Commuter access to the Minuteman Commuter Bikeway will be provided via Ryder Street, and local bicycle access to Massachusetts Avenue will be provided over the bridge and via Ryder Street.

Figure 6 presents the proposed site access for vehicles, pedestrians, and bicycles.





**Figure 6: Site Access Diagram**

1165R Mass Ave Apartments

Arlington, MA

Data Source: MassGIS

Nitsch Project #13990.



## 7.2 Trip Generation

As the existing Mill building will be eliminated, and replaced with the apartment complex, a trip generation credit must be applied to accurately determine the traffic impacts. Therefore, we calculated the trip generation for the existing use and the proposed use to obtain the net trip generation. Standard methodology for determining trip generation of a site is to use the ITE *Trip Generation, 10<sup>th</sup> Edition*<sup>2</sup> (“the ITE method”). For the existing Mill building we used Land Use Code (LUC) 710 – “General Office Building.” For the new apartment complex, we used LUC 221 – “Multifamily Housing (Mid-Rise)”, which includes apartments, townhouses, and condominiums located within the same building with at least three (3) other dwelling units and between three (3) and 10 levels (floors) of residence. Table 7 represents the total unadjusted peak hour trip generation.

**Table 7 – Peak Hour Trip Generation**

Period	Direction	ITE Office Trips (17,000 SF)	ITE Housing Trips (130 units)	Net Project Trips
Weekday Morning	Enter	21	9	-12
	Exit	4	38	34
	<b>Total</b>	<b>25</b>	<b>47</b>	<b>22</b>
Weekday Evening	Enter	4	46	42
	Exit	22	22	0
	<b>Total</b>	<b>26</b>	<b>68</b>	<b>42</b>

Table 7 shows that the weekday morning entering trips generated from the proposed development are less than the trips generated from the existing land use, resulting in a net negative projected trip number. To accurately represent the overall trip generation for the Innovation Park, it is acceptable to apply the negative number.

### Mode Share

Based on the Town of Arlington 2015 Master Plan, in 2010, two-thirds of Arlington commuters worked in Boston or Cambridge, and approximately 70% of the workforce used cars, which was down from 75% in 2000. However, bicycle use nearly doubled to 2% from 2000 to 2010. With the heavy traffic and the high cost of owning a car, urban areas recently have been seeing a significant drop in automobile uses and an increase in use of public transit, bicycling, and walking. For this site in particular, with its close proximity to the Minuteman Commuter Bikeway and the MBTA Bus Route 79, which both have direct connections to Alewife Station, it is expected that the number of bicyclists and public transit users would be higher than average for the Town of Arlington, resulting in a lower number of vehicle (car) trips. For this assessment, we adjusted mode share and applied it to the net trip generation, as shown in Table 8.

<sup>2</sup> *Trip Generation*, Institute of Transportation Engineers, 10th Edition, 2016, Washington, D.C.



**Table 8 – Mode Share for 1165R Mass Ave Apartments (Net Trip Generation)**

Mode	2010 Distribution	Site Distribution	Weekday Morning			Weekday Evening		
			Enter	Exit	Total	Enter	Exit	Total
CAR	72%	67%	-8	23	15	28	0	28
TRANSIT	17%	19%	-2	6	4	8	0	8
BICYCLE	2%	5%	-1	2	1	2	0	2
WALK	3%	3%	0	1	1	1	0	1
TAXI	1%	1%	0	0	0	0	0	0
WORK FROM HOME	5%	5%	-1	2	1	2	0	2
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>-12</b>	<b>34</b>	<b>22</b>	<b>42</b>	<b>0</b>	<b>42</b>

To obtain the projected traffic volume that will be added to the roadway network, the appropriate vehicle occupancy rates should be applied to car-person trips shown in Table 8. However, as the net number of car trips are low, a vehicle occupancy rate of 1.0 persons per car was used to provide a conservative analysis.

### 7.3 Trip Distribution

We based the additional peak-hour trips to/from the site using the existing directional distribution based on our traffic counts as shown in Table 9.

**Table 9 – Trip Distribution**

Direction and Roadway	Percentage
To/From East on Massachusetts Avenue	60%
To/From West on Massachusetts Avenue	25%
To/From Southwest on Appleton Street	15%
<b>Total</b>	<b>100%</b>
Source: Figure 3: 2020 Existing Peak Hour Volumes	

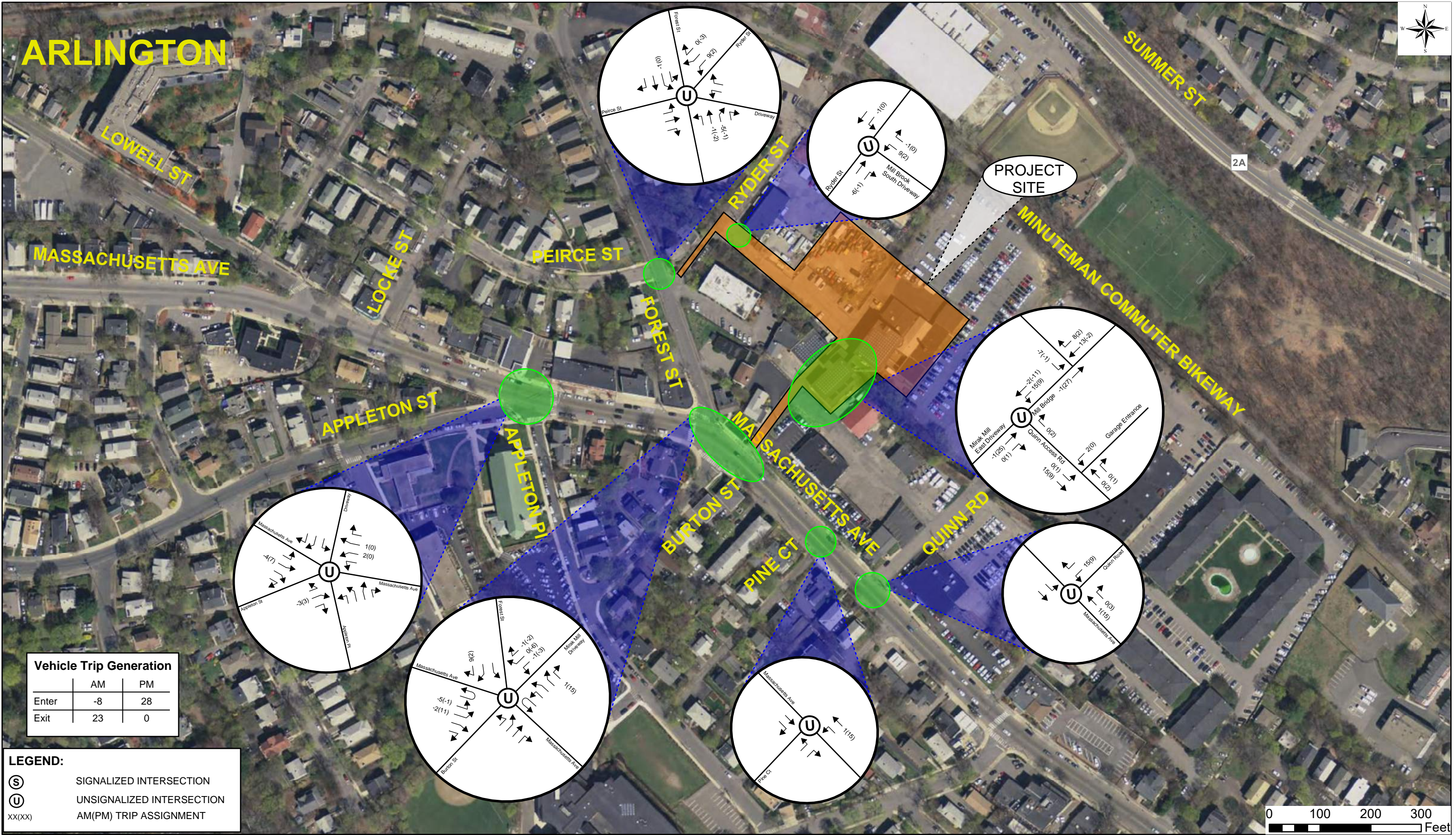
### 7.4 Trip Assignment

We assigned the new peak-hour trips to the study intersections by multiplying the quantity of new trips from Table 8 by the Trip Distribution percentages shown in Figure 7. The resultant new trip assignment volumes are shown in Figure 8.









**Figure 8: Net Trip Generation Assignment**

1165R Mass Ave Apartments

Arlington, MA

Data Source: MassGIS

Nitsch Project #13990.



As noted in Section 7.1, vehicle circulation and access for the site will change with the use therefore changing the overall Mirak Innovation Park trip distribution. The overall Park trips at the driveways are compared in Table 10.

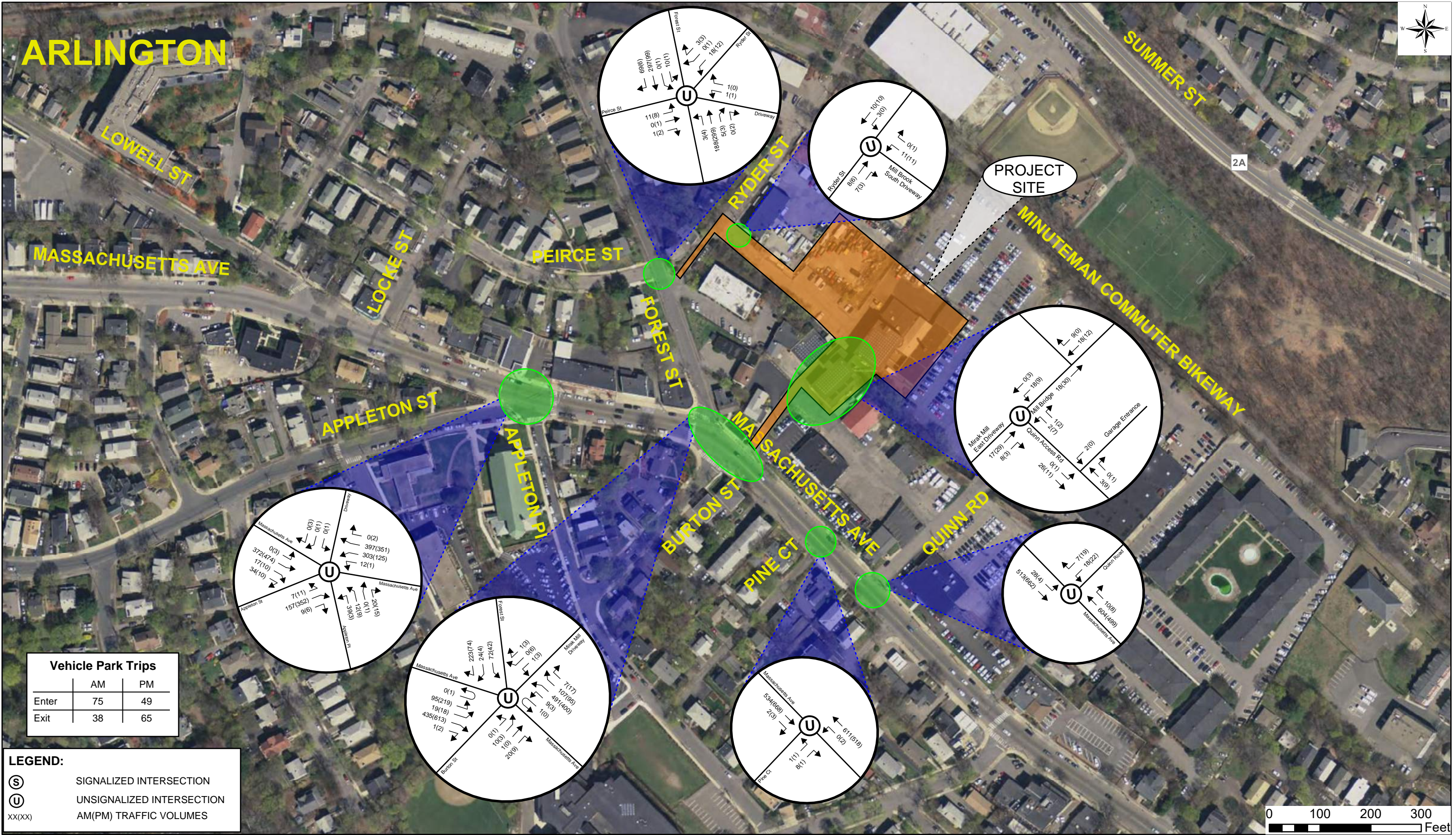
**Table 10 – Driveway Volume Comparison**

Driveway	Weekday Morning						Weekday Evening					
	2020 Existing			2025 Build			2020 Existing			2025 Build		
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total
West Driveway	28	2	30	27	2	29	8	23	31	34	12	46
Quinn Road	38	10	48	38	25	63	9	32	41	12	41	53
Ryder Street Driveway	17	3	20	10	11	21	4	10	14	3	12	15
<b>Total</b>	<b>83</b>	<b>15</b>	<b>98</b>	<b>75</b>	<b>38</b>	<b>113</b>	<b>21</b>	<b>65</b>	<b>86</b>	<b>49</b>	<b>65</b>	<b>114</b>

## 7.5 2025 Build Traffic Volumes

We added the Trip Assignment volumes from Figure 8 to 2025 No-Build conditions traffic volumes from Figure 5 to yield the 2025 Build conditions peak-hour traffic volumes, which are shown in Figure 9.





**Figure 9: 2025 Build Peak Hour Volumes**

1165R Mass Ave Apartments

Arlington, MA

Data Source: MassGIS  
Nitsch Project #13990.



## 7.6 Parking Generation

To determine the required amount of parking needed for the proposed development, we compared the parking rates from the Town of Arlington Zoning Board of Appeals (ZBA), the Town of Arlington Master Plan<sup>3</sup>, the ITE *Parking General Manual*, 5th Edition, and the parking utilization study. For the ITE rates, we used Land Use Code 221 “Multifamily Housing (Mid-Rise).” Given the proposed apartment mix, it was determined the best means to calculate parking would be to use the number of bedrooms as the independent variable. From the data we collected from comparable developments in the Town, we found that peak parking utilization in the area is 0.55 spaces per bedroom (See Table 4 – Section 3.3). The parking rate comparisons are shown in Table 11 below.

**Table 11 – Parking Requirement Comparisons**

Type	# of Units	# of Bed	ZBA		Master Plan		ITE		Study	
			Rate/unit	# of spaces	Rate/unit	# of spaces	Rate/bed	# of spaces	Rate/bed	# of spaces
Studio	31	31	1	31	1.5	47	0.75	23	0.55	17
1-Bedroom	55	55	1.15	63	1.5	82	0.75	41	0.55	30
2-Bedroom	31	62	1.5	47	1.5	47	0.75	47	0.55	34
3-Bedroom	13	39	2	26	1.5	19	0.75	29	0.55	21
<b>Total</b>	<b>130</b>	<b>187</b>		<b>167</b>		<b>195</b>		<b>140</b>		<b>103</b>

Given that the most accurate means of estimating parking rates is from a comparable development study, we found that 103 spaces would be necessary to accommodate the 187 bedrooms. As noted in Section 3.3, the parking lots experience an average of 15% utilization reduction during weekday midday period and 2% utilization reduction during the Saturday mid-morning period. Based on these numbers and existing Workbar and Mill building parking data as described in Section 3.3, we calculated the parking spaces required for the proposed development. A summary of the future parking generation is shown in Table 12.

**Table 12 – Future Parking Generation**

Items		Quantity	
1	Number of proposed bedrooms	187 bedrooms	
2	Required apartment spaces (based on 0.55 spaces/bedroom)	103 spaces	
		<b>Weekday Midday</b>	<b>Saturday Mid-morning</b>
3	Anticipated occupied apartment spaces (based on study utilization)	87 spaces (85%)	101 spaces (98%)
4	Calculated required Workbar spaces (from Section 3.3)	24 spaces	1 space
5	Contracted required Workbar spaces	40 spaces	10 spaces
6	<b>Total calculated required net spaces (rows 3 + 4)</b>	<b>111 spaces</b>	<b>102 spaces</b>
7	<b>Total contract required spaces net spaces (rows 3 + 5)</b>	<b>127 spaces</b>	<b>111 spaces</b>

As shown, the anticipated number of parking spaces based on our site utilization assessment of comparable developments and the required number of spaces for the Workbar, the 136 parking spaces proposed will be enough to accommodate the demand.

<sup>3</sup> The Town of Arlington Master Plan calculations for mode share are based on data from 2000 – 2010.





## 7.7 Construction Management Outline

During construction of the development, no long-term detours or lane closures at any of the study intersections or study roadways is anticipated.

During construction, pedestrian accessibility should be maintained. If necessary, temporary crosswalks and ramps should be provided. All pedestrian accommodations should adhere to Massachusetts Architectural Access Board (MAAB) and Americans with Disabilities Act (ADA) guidelines.



## 8 Traffic Operations Analysis

### 8.1 Evaluation Criteria

Traffic operations at intersections are evaluated using the performance measures of average vehicular delay, level of service (LOS), volume-to-capacity (v/c) ratio, and average and 95th percentile queue lengths.

LOS is a qualitative measure that describes operating conditions through letter designations, from A to F. It is defined for intersections in terms of average control delay per vehicle. LOS A indicates the most favorable condition, with minimum traffic delay. LOS F represents the worst condition where there is significant traffic delay. LOS D or better is typically considered desirable for peak-hour operation in urban and suburban settings. The delay designations for each LOS level differ slightly between signalized and unsignalized intersections due to driver expectations and behavior. Table 13 summarizes the LOS criteria for intersections as used in this analysis.

**Table 13 – Intersection Level of Service Criteria**

Level of Service	Average Control Delay (sec/veh)	
	Signalized	Unsignalized
A	0-10	0-10
B	>10-20	>10-15
C	>20-35	>15-25
D	>35-55	>25-35
E	>55-80	>35-50
F	>80	>50
Source: HCM 2000		

For signalized intersections, LOS is reported by lane group, by approach, and for the entire intersection. For unsignalized intersections, the analysis assumes that the traffic on the mainline is not affected by traffic on the side street. As such, an unsignalized intersection's LOS is generally reported for left turns on the mainline and all side street movements, and an overall intersection LOS is not determined.

The v/c ratio is a measure of congestion at an intersection approach. The capacity of a facility is the maximum hourly rate at which persons or vehicles reasonably can be expected to traverse a point or a uniform section of a lane or roadway under prevailing roadway, traffic, and control conditions. A v/c ratio below one indicates that the intersection approach has adequate capacity to serve the arriving traffic demand. A v/c ratio that approaches or exceeds 1.0 indicates traffic congestion or poor operating conditions. In that situation, vehicles arrive faster than they can be served, so queue lengths can theoretically grow indefinitely, which is the unstable condition.

Since arrival volumes fluctuate throughout the peak hour, queue lengths vary. The average (50th percentile) queue length represents the maximum back of queue on a typical cycle for a signalized intersection. Average queue lengths are not reported for unsignalized intersections. The 95th percentile queue, reported for both signalized and unsignalized intersections, occurs with 95th percentile traffic volumes, and its length commonly denotes the farthest extent of the vehicle queue.





## 8.2 Capacity Analyses

We performed capacity analyses for the study intersections under 2020 Existing conditions, 2025 No-Build conditions, and 2025 Build conditions during the weekday morning and evening peak hours using Trafficware's Synchro 10 software. Synchro uses, in part, the traffic operational analysis methodology of the Transportation Research Board's *Highway Capacity Manual* (HCM).<sup>4</sup> We generated the results of the capacity analyses using Synchro's Percentile Delay Method for delay, v/c ratio, and queue lengths, supported by HCM 2000 methodology for unsignalized intersection analysis.

Synchro software has limitations preventing modeling of five-legged complex unsignalized intersections such as the intersection of Massachusetts Avenue at Appleton Street, Appleton Place, and the commercial driveway and the intersection of Massachusetts Avenue at Forest Street, Burton Street, and the Mirak Innovation Park West Driveway. As such, each of these intersections has been split into two nodes for the purposes of this analysis. We have recombined the delay output from the two nodes to present the average delay and LOS for entire movements through both nodes of the intersections. While the results of this method may not accurately represent the vehicle queuing, the intersection delay and operations represent the field observations.

Based on the HCM, the critical gap timing, which is crucial in determining the Percentile Delay Method, is related to speed. During the peak hour, it was observed that speeds were significantly lower than the posted speed limit due to heavy density, therefore the peak hour critical gaps along Massachusetts Avenue are less than the off-peak hours. As such, the critical gap timing input data for this Synchro capacity analysis has been calibrated to accurately represent the peak hour traffic conditions.

The Synchro output sheets for the capacity analyses are included in Appendix E.

### 8.2.1 2020 Existing Conditions Capacity Analysis

The first analysis evaluated traffic operations with 2020 existing traffic volumes under existing geometric conditions and signal timing/phasing. We derived peak hour factors (PHFs) and heavy vehicle percentages from the TMC data. We applied PHFs on an approach-by-approach basis, and we applied heavy vehicle percentages by lane group. Table 14 summarizes the capacity analysis results for the 2020 Existing conditions.

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<sup>4</sup> *Highway Capacity Manual 2000 (HCM 2000)*, Transportation Research Board, Washington, D.C., 2000.




**Table 14 – Capacity Analysis Summary: 2020 Existing Conditions**

Location	Direction / Movement <sup>a</sup>	Weekday Morning Peak Hour				Weekday Evening Peak Hour			
		v/c Ratio	Delay <sup>b</sup>	LOS	95th Queue <sup>c</sup>	v/c Ratio	Delay <sup>b</sup>	LOS	95th Queue <sup>c</sup>
Massachusetts Avenue and Appleton Street/ Appleton Place/ Commercial Driveway*	Mass Ave EB - LTRR	0.00	0.1	A	0	0.00	0.1	A	0
	Mass Ave WB - LLTR	0.40	9.4	A	49	0.12	3.5	A	10
	Appleton PI NB - LLTR	0.28	22.8	C	28	0.04	24.1	C	3
	Driveway SB - LLRR	0.01	47.5	E	1	0.07	35.3	E	6
	Appleton St NEB - LLRR	0.50	43.7	E	66	0.40	29.0	D	49
Massachusetts Avenue and Forest Street/ Burton Street/ West Driveway*	Mass Ave EB - LLTR	0.12	3.7	A	10	0.22	5.0	A	21
	Mass Ave WB - LTRR	0.38	0.3	A	0	0.30	0.1	A	0
	Burton St NB - LLTR	0.16	16.2	C	14	0.06	17.2	C	5
	Forest St SB - LLRR	0.88	57.3	F	214	0.40	23.2	C	47
	West Dwy SWB - LTRR	0.02	13.8	B	1	0.06	12.0	B	5
Massachusetts Avenue and Pine Court	Mass Ave EB - TR	0.34	0.0	A	0	0.39	0.0	A	0
	Mass Ave WB - LT	0.00	0.0	A	0	0.00	0.1	A	0
	Pine Ct NB - LR	0.03	11.3	B	2	0.01	13.1	B	1
Massachusetts Avenue and Quinn Road	Mass Ave EB - TL	0.04	1.0	A	3	0.00	0.1	A	0
	Mass Ave WB - TR	0.37	0.0	A	0	0.29	0.0	A	0
	Quinn Rd SB - LR	0.03	12.8	B	3	0.13	13.3	B	11
West Driveway and Quinn Access Road	West Dr WB - LR	0.00	8.8	A	0	0.02	8.8	A	2
	Quinn Access Rd NB - TR	0.03	0.0	A	0	0.01	0.0	A	0
	Quinn Access Rd SB - LT	0.01	5.3	A	1	0.00	0.0	A	0
Forest Street and Ryder Street/Peirce Street	Peirce St EB - LTR	0.05	14.5	B	4	0.02	11.6	B	2
	Ryder St WB - LTR	0.04	14.0	B	3	0.04	11.6	B	3
	Forest St NB - LTR	0.00	0.2	A	0	0.00	0.1	A	0
	Forest St SB - LTR	0.01	0.3	A	1	0.00	0.4	A	0
Ryder Street and Ryder Street Driveway	Ryder St Dwy WB - LR	0.01	9.2	A	1	0.02	8.7	A	1
	Ryder St NB - TR	0.02	0.0	A	0	0.01	0.0	A	0
	Ryder St SB - LT	0.00	2.3	A	0	0.00	0.0	A	0
<sup>a</sup> Direction: NB = Northbound, SB = Southbound, EB = Eastbound, WB = Westbound; NEB = Northeast-bound, NWB = Northwest-bound, SEB = Southeast-bound, SWB = Southwest-bound Movement: L = Left-turn, T = Through movement, R = Right-turn, LL = Hard Left + Bear Left, RR = Bear Right + Hard Right <sup>b</sup> Average vehicle delay (seconds) <sup>c</sup> 95th percentile queue length in feet, based upon average vehicle length of 25 feet # 95th percentile volume exceeds capacity; queue may be longer; queue shown is maximum after two cycles * Delay and LOS are based on recombination of data from two nodes of a single intersection, v/c ratios and 95th percentile queues based on Synchro output for initial approach									

As shown from Table 14, most approaches to the intersections are expected to operate at LOS A or B during both peak hours, with operational deficiencies (lane groups operating at LOS E or F) at only two (2) intersections:



- 
- Massachusetts Avenue and Appleton Street/Appleton Place/Commercial Driveway; and
  - Massachusetts Avenue and Forest Street/Burton Street/Mirak Innovation Park West Driveway.

At the intersection of Massachusetts Avenue and Appleton Street/Appleton Place/Commercial Driveway, the stop-controlled Appleton Street approach operates at LOS E during the weekday morning peak hour and LOS D during the weekday evening peak hour. The southbound driveway operates at LOS E during both peak hours due to Synchro limitations, but with driveway volumes less than five (5) vehicles per hour, the approach is not as operationally deficient as the results represent. All other movements operate at LOS D or better in both peak hours.

At the intersection of Massachusetts Avenue and Forest Street/Burton Street/Mirak Innovation Park West Driveway, the stop-controlled Forest Street southbound approach operates at LOS F during the weekday morning peak hour and LOS C during the evening peak hour. Although the critical gap for the southbound approach was adjusted to represent the field condition more accurately, Synchro limitations still represent a delay significantly higher than what was observed during the morning peak hour. All other movements operate at LOS D or better in both peak hours.

### **8.2.2 2020 No-Build Conditions Capacity Analysis**

Under future No-Build conditions, we kept lane geometry and traffic control the same as existing. For all intersections, we applied the 2025 No-Build traffic volumes with the same heavy vehicle percentages and PHFs as existing. Table 15 summarizes the analysis results for 2025 No-Build conditions.



**Table 15 – Capacity Analysis Summary: 2025 No-Build Conditions**

Location	Direction / Movement <sup>a</sup>	Weekday Morning Peak Hour				Weekday Evening Peak Hour			
		v/c Ratio	Delay <sup>b</sup>	LOS	95th Queue <sup>c</sup>	v/c Ratio	Delay <sup>b</sup>	LOS	95th Queue <sup>c</sup>
Massachusetts Avenue and Appleton Street/ Appleton Place/ Commercial Driveway*	Mass Ave EB - LTRR	0.00	0.1	A	0	0.00	0.1	A	0
	Mass Ave WB - LLTR	0.46	11.0	B	62	0.14	3.8	A	12
	Appleton PI NB - LLTR	0.32	25.8	D	34	0.04	28.0	D	3
	Driveway SB - LLRR	0.01	59.0	F	1	0.04	22.4	C	3
	Appleton St NEB - LLRR	0.59	54.3	F	91	0.45	33.9	D	60
Massachusetts Avenue and Forest Street/ Burton Street/ West Driveway*	Mass Ave EB - LLTR	0.14	4.2	A	12	0.25	5.8	A	25
	Mass Ave WB - LTRR	0.42	0.3	A	0	0.01	0.1	A	1
	Burton St NB - LLTR	0.20	18.3	C	19	0.08	19.0	C	6
	Forest St SB - LLRR	1.11	120.5	F	344	0.52	31.2	D	70
	West Dwy SWB - LTRR	0.03	17.8	C	2	0.08	12.8	B	7
Massachusetts Avenue and Pine Court	Mass Ave EB - TR	0.37	0.0	A	0	0.43	0.0	A	0
	Mass Ave WB - LT	0.00	0.0	A	0	0.00	0.1	A	0
	Pine Ct NB - LR	0.03	11.7	B	3	0.01	14.0	B	1
Massachusetts Avenue and Quinn Road	Mass Ave EB - TL	0.04	1.0	A	3	0.01	0.1	A	0
	Mass Ave WB - TR	0.41	0.0	A	0	0.32	0.0	A	0
	Quinn Rd SB - LR	0.04	13.6	B	3	0.15	14.2	B	12
West Driveway and Quinn Access Road	West Dr WB - LR	0.00	8.8	A	0	0.02	8.7	A	1
	Quinn Access Rd NB - TR	0.03	0.0	A	0	0.01	0.0	A	0
	Quinn Access Rd SB - LT	0.01	5.3	A	1	0.00	0.0	A	0
Forest Street and Ryder Street/Peirce Street	Peirce St EB - LTR	0.06	15.5	C	5	0.03	12.2	B	2
	Ryder St WB - LTR	0.04	15.0	B	4	0.05	12.1	B	4
	Forest St NB - LTR	0.00	0.2	A	0	0.00	0.1	A	0
	Forest St SB - LTR	0.01	0.3	A	1	0.01	0.5	A	0
Ryder Street and Ryder Street Driveway	Ryder St Dwy WB - LR	0.01	9.2	A	1	0.02	8.8	A	1
	Ryder St NB - TR	0.02	0.0	A	0	0.01	0.0	A	0
	Ryder St SB - LT	0.00	2.2	A	0	0.00	0.0	A	0
<sup>a</sup> Direction: NB = Northbound, SB = Southbound, EB = Eastbound, WB = Westbound; NEB = Northeast-bound, NWB = Northwest-bound, SEB = Southeast-bound, SWB = Southwest-bound Movement: L = Left-turn, T = Through movement, R = Right-turn, LL = Hard Left + Bear Left, RR = Bear Right + Hard Right <sup>b</sup> Average vehicle delay (seconds) <sup>c</sup> 95th percentile queue length in feet, based upon average vehicle length of 25 feet # 95th percentile volume exceeds capacity; queue may be longer; queue shown is maximum after two cycles * Delay and LOS are based on recombination of data from two nodes of a single intersection, v/c ratios and 95th percentile queues based on Synchro output for initial approach									

Under 2025 No-Build traffic conditions, most of the intersection operations are expected to remain the same as under 2020 Existing conditions with only two significant changes in approach delays and levels of service.





At the intersection of Massachusetts Avenue and Appleton Street/Appleton Place/Commercial Driveway, the Appleton Street approach and the southbound driveway approach are both expected to decline during the weekday morning peak hour from LOS E to LOS F. For the Appleton Street approach, the average delay increases by about 10 seconds from 43.7 seconds to 54.3 seconds. During the weekday evening peak hour, the southbound driveway approach improves from LOS E to LOS C. All other approaches remain at LOS D or better, with slight increases in average delays and v/c ratios due to the increased traffic volumes.

**8.2.3 2025 Build Conditions Capacity Analysis**

We performed capacity analyses for the proposed build conditions that account for the change in site use from the existing office building to the proposed apartment complex. Under these future 2025 Build conditions, we kept lane geometry and traffic control the same at all study intersections.

Table 16 summarizes the analysis results for the 2025 Build conditions.




**Table 16 – Capacity Analysis Summary: 2025 Build Conditions**

Location	Direction / Movement <sup>a</sup>	Weekday Morning Peak Hour				Weekday Evening Peak Hour			
		v/c Ratio	Delay <sup>b</sup>	LOS	95th Queue <sup>c</sup>	v/c Ratio	Delay <sup>b</sup>	LOS	95th Queue <sup>c</sup>
Massachusetts Avenue and Appleton Street/ Appleton Place/ Commercial Driveway*	Mass Ave EB - LTRR	0.00	0.1	A	0	0.00	0.1	A	0
	Mass Ave WB - LLTR	0.46	11.0	B	62	0.14	3.8	A	12
	Appleton PI NB - LLTR	0.32	25.8	D	34	0.04	28.8	D	3
	Driveway SB - LLRR	0.01	58.5	F	1	0.04	23.1	C	3
	Appleton St NEB - LLRR	0.59	53.7	F	89	0.46	34.7	D	61
Massachusetts Avenue and Forest Street/ Burton Street/ West Driveway*	Mass Ave EB - LLTR	0.13	4.0	A	12	0.25	6.1	A	25
	Mass Ave WB - LTRR	0.42	0.3	A	0	0.34	0.1	A	0
	Burton St NB - LLTR	0.20	18.1	C	18	0.08	19.4	C	6
	Forest St SB - LLRR	1.12	121.6	F	354	0.53	31.6	D	72
	West Dwy SWB - LTRR	0.03	17.8	C	2	0.08	13.0	B	7
Massachusetts Avenue and Pine Court	Mass Ave EB - TR	0.37	0.0	A	0	0.43	0.0	A	0
	Mass Ave WB - LT	0.00	0.0	A	0	0.00	0.1	A	0
	Pine Ct NB - LR	0.03	11.7	B	3	0.01	14.1	B	1
Massachusetts Avenue and Quinn Road	Mass Ave EB - TL	0.04	1.0	A	3	0.01	0.1	A	0
	Mass Ave WB - TR	0.41	0.0	A	0	0.33	0.0	A	0
	Quinn Rd SB - LR	0.09	13.8	B	7	0.17	16.0	C	19
West Driveway and Quinn Access Road	West Dr WB - LR	0.00	9.1	A	0	0.02	9.0	A	1
	Quinn Access Rd NB - TR	0.02	0.0	A	0	0.03	0.0	A	0
	Quinn Access Rd SB - LT	0.03	7.6	A	3	0.01	5.5	A	1
Forest Street and Ryder Street/Peirce Street	Peirce St EB - LTR	0.06	15.4	C	5	0.02	12.1	B	2
	Ryder St WB - LTR	0.08	16.0	C	7	0.05	12.4	B	4
	Forest St NB - LTR	0.00	0.2	A	0	0.00	0.1	A	0
	Forest St SB - LTR	0.01	0.3	A	1	0.01	0.5	A	0
Ryder Street and Ryder Street Driveway	Ryder St Dwy WB - LR	0.03	9.4	A	3	0.02	8.8	A	2
	Ryder St NB - TR	0.01	0.0	A	0	0.01	0.1	A	0
	Ryder St SB - LT	0.00	1.9	A	0	0.01	0.0	A	0

<sup>a</sup> Direction: NB = Northbound, SB = Southbound, EB = Eastbound, WB = Westbound;  
NEB = Northeast-bound, NWB = Northwest-bound, SEB = Southeast-bound, SWB = Southwest-bound  
Movement: L = Left-turn, T = Through movement, R = Right-turn, LL = Hard Left + Bear Left, RR = Bear Right + Hard Right  
<sup>b</sup> Average vehicle delay (seconds)  
<sup>c</sup> 95th percentile queue length in feet, based upon average vehicle length of 25 feet  
# 95th percentile volume exceeds capacity; queue may be longer; queue shown is maximum after two cycles  
\* Delay and LOS are based on recombination of data from two nodes of a single intersection, v/c ratios and 95th percentile queues based on Synchro output for initial approach

Under Build conditions, most of the intersections are expected to operate the same as under No-Build conditions with few minor changes.





At the intersection of Massachusetts Avenue and Appleton Street/Appleton Place/Commercial Driveway, the Appleton Street and southbound driveway approaches are expected to remain at LOS F during the weekday morning peak hour. However, they both experience a slight decrease in average delay of less than a second. All other movements are expected to remain at LOS D or better.

At the intersection of Massachusetts Avenue and Forest Street/Burton Street/Mirak Innovation Park West Driveway, the Forest Street approach is expected to remain at LOS F during the weekday morning peak hour with delay increased by 1.1 seconds. All other movements are expected to remain at LOS D or better.

## 9 Transportation Demand Management

The Proponent is committed to implementing Transportation Demand Management (TDM) measures to minimize automobile usage and Project-related traffic impacts. TDM will be facilitated by the nature of the Project, which does not generate significant peak hour trips, and its proximity to numerous public transit alternatives and bicycle facilities.

On-site management will keep a supply of transit information (schedules, maps, and fare information) to be made available to the residents of the development. The Proponent will work with the Town to develop a TDM program appropriate to the Project and consistent with its level of impact.

The Proponent is prepared to take advantage of good transit and bicycle access in marketing the site to future residents by working with them to implement the following TDM measures to encourage the use of non-vehicular modes of travel.

The TDM measures for the Project may include, but are not limited to, the following:

- **Orientation Packets:** The Proponent will provide orientation packets to new residents and tenants containing information on site access and circulation; and available transportation choices, including transit routes/schedules and nearby vehicle sharing locations and bicycle facilities. On-site management will work with residents and tenants as they move in to help facilitate transportation for new arrivals.
- **Bicycle Accommodation:** The Proponent will provide interior and exterior bicycle storage in secure, sheltered areas for residents, as well as repair and maintenance stations. Subject to necessary approvals, public-use bicycle racks for visitors will be placed near building entrances and must adhere to the Town of Arlington's regulations.
- **Electric Vehicle Charging:** The Proponent will explore the feasibility of providing electric vehicle charging stations within the garages.
- **Shared-Car Services:** The Proponent will explore the feasibility of providing a shared car service (e.g., Zip Car) on-site to help reduce the need for residents to own a vehicle.
- **Transportation Coordinator:** The Proponent will designate a transportation coordinator to oversee transportation issues including parking, service and loading, and deliveries and will work with residents as they move in to raise awareness of public transportation, bicycling, and walking opportunities.
- **Project Web Site:** The web site will include transportation-related information for residents, workers, and visitors.
- **Transportation Monitoring Program:** The Proponent will implement a transportation monitoring program that will periodically monitor the TDM program through a Town of Arlington survey. The building TDM program shall be revised as necessary to update the elements as new trip reduction measures become available and/or certain programs become obsolete or ineffective.





## 10 Conclusions

Nitsch Engineering has prepared this Traffic Impact Report (TIR) for the Project in Arlington Massachusetts. We studied seven (7) unsignalized intersections to establish the impact the removal of the existing Mirak Mill office building and the construction of a 130-unit apartment complex would have on intersection traffic operations.

The crash data over the last three years available from MassDOT indicate that the intersection of Forest Street at Ryder Street/Peirce Street has a crash rate nearly three (3) times the average District 4 and Statewide crash rates. The intersection of Massachusetts Avenue and Appleton Street/Appleton Place/Commercial Driveway and the intersection of Massachusetts Avenue and Forest Street/Burton Street/Mirak Innovation Park West Driveway are comparable to the District 4 and Statewide averages. The other study intersections all have crash rates well below those averages.

The traffic signal warrant analysis indicates that a traffic signal may be justified under current traffic conditions at the unsignalized intersection of Massachusetts Avenue and Forest Street/Burton Street/Mirak Innovation Park West Driveway, based on the Eight-Hour Vehicular Volume, Four-Hour Vehicular Volume, and Peak Hour warrants. However, as this is an existing condition upon which the project will have minimal effect, it does not require that the Proponent install a new traffic signal.

For future conditions, we projected some of the existing traffic volumes within the study area over a 5-year period to the horizon year 2025 using an annual growth rate of 2.0%, based on expected regional growth.

We estimated the net quantity of vehicle trips the proposed apartment complex would generate based on Institute of Transportation Engineers (ITE) *Trip Generation, 10th Edition* criteria. We applied an appropriate travel mode share based on the Town of Arlington 2015 Master Plan, calibrated for proximity to the Minuteman Commuter Bikeway and the MBTA bus stop, and we distributed the additional vehicle trips to the roadway network using existing travel patterns and site access modifications.

We performed a vehicle capacity analysis to compare the weekday morning and evening peak hours of the 2020 Existing conditions, 2025 No-Build conditions, and 2025 Build conditions for each of the seven (7) study intersections. Under existing conditions, our analysis indicates operational deficiencies at the following two (2) intersections:

- Massachusetts Avenue at Appleton Street/Appleton Place/Commercial Driveway; and
- Massachusetts Avenue and Forest Street/Burton Street/Mirak Innovation Park West Driveway.

Traffic operations are calculated to degrade from the 2020 Existing to 2025 No-Build conditions at some of the stop-controlled approaches to these intersections. However, the change in traffic operations from 2025 No-Build to 2025 Build conditions are so minor that they are considered negligible by current engineering standards. Therefore, as our analysis indicates that there is not a significant degradation in delay as a result of the Project, we do not recommend any additional changes to the roadway network.



1165R MASSACHUSETTS AVENUE  
CH. 40B ZBA SUBMISSION  
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### Section 3.2.18 List of Abutters

Please see the enclosed List of Abutters , obtained from the Town of Arlington Assessor's Office online.



**Abutters List**[print this list](#)

Date: November 30, 2020

Subject Property Address: 1165-1167 MASS AVE Arlington, MA

Subject Property ID: 57-2-10.B

Search Distance: 0 Feet

-----  
Prop ID: 57-2-11

Prop Location: 15 RYDER ST Arlington, MA

Owner: LALICATA REALTY LLC

Co-Owner:

Mailing Address:

15 RYDER ST  
ARLINGTON, MA 02476  
----------  
Prop ID: 57-2-15

Prop Location: 0-LOT RYDER ST Arlington, MA

Owner: YUKON REALTY LLC

Co-Owner:

Mailing Address:

1125 MASS AVE  
ARLINGTON, MA 02476  
----------  
Prop ID: 57-2-15.A

Prop Location: 1171 MASS AVE Arlington, MA

Owner: ANNESE ROBERT J TR J-JUDITH

Co-Owner: 1171 MASS AVE REALTY TRUST

Mailing Address:

2 SHIRE LANE  
BEDFORD, MA 01730  
----------  
Prop ID: 57-2-15.C

Prop Location: 0-LOT RYDER ST Arlington, MA

Owner: MIRAK TRUCK CENTER LLC

Co-Owner:

Mailing Address:

1151 R MASS AVE  
ARLINGTON, MA 02476  
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323 of 501



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Prop ID: 57-2-16.A  
Prop Location: 1155-R MASS AVE Arlington, MA  
Owner: YUKON REALTY LLC  
Co-Owner:  
Mailing Address:  
1125 MASS AVE  
ARLINGTON, MA 02476  
-----

-----  
Prop ID: 57.B-1-1  
Prop Location: 9 RYDER ST UNIT 1 Arlington, MA  
Owner: TZOVARAS GREGORIOS/ TRUSTEE  
Co-Owner: GREGORIOS TZOVARAS TRUST  
Mailing Address:  
3 THOMAS STREET  
WOBBURN, MA 01801  
-----

-----  
Prop ID: 57.B-1-10  
Prop Location: 9 RYDER ST UNIT 10 Arlington, MA  
Owner: HAMPTON SHELDON  
Co-Owner:  
Mailing Address:  
9 RYDER STREET #10  
ARLINGTON, MA 02476  
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-----  
Prop ID: 57.B-1-11  
Prop Location: 9 RYDER ST UNIT 11 Arlington, MA  
Owner: HAN XIAOGANG  
Co-Owner: DONG JENNIFER  
Mailing Address:  
508 LOWELL ST  
LEXINGTON, MA 02420  
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-----  
Prop ID: 57.B-1-12  
Prop Location: 9 RYDER ST UNIT 12 Arlington, MA  
Owner: AGUILAR LUZ G  
Co-Owner:  
Mailing Address:  
9 RYDER ST UNIT 12  
ARLINGTON, MA 02476  
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-----  
Prop ID: 57.B-1-13  
Prop Location: 9 RYDER ST UNIT 13 Arlington, MA  
Owner: WINNIG-GIULIANO MICHAEL R  
Co-Owner:  
Mailing Address:  
    10 WOODLAND ST  
    NATICK, MA 01760  
-----

-----  
Prop ID: 57.B-1-14  
Prop Location: 9 RYDER ST UNIT 14 Arlington, MA  
Owner: GILMARTIN WILLIAM T  
Co-Owner:  
Mailing Address:  
    9 RYDER ST #14  
    ARLINGTON, MA 02476  
-----

-----  
Prop ID: 57.B-1-15  
Prop Location: 9 RYDER ST UNIT 15 Arlington, MA  
Owner: RYDER STREET LLC  
Co-Owner:  
Mailing Address:  
    46 COLUMBIA RD  
    ARLINGTON, MA 02474  
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-----  
Prop ID: 57.B-1-16  
Prop Location: 9 RYDER ST UNIT 16 Arlington, MA  
Owner: JACOB JOAN/TRUSTEE  
Co-Owner: 33 REGENT RD TRUST  
Mailing Address:  
    107 CLOCKTOWER DR UNIT 204  
    WALTHAM, MA 02452  
-----

-----  
Prop ID: 57.B-1-17  
Prop Location: 9 RYDER ST UNIT 17 Arlington, MA  
Owner: CHIN YOLANDA & JENNIFER  
Co-Owner:  
Mailing Address:



17 PIEDMONT ST  
ARLINGTON, MA 02474

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Prop ID: 57.B-1-18  
Prop Location: 9 RYDER ST UNIT 18 Arlington, MA  
Owner: FALLAVOLLITA ROBERT P &  
Co-Owner: PETITTO CATERINA & ANGLEA E  
Mailing Address:  
9 RYDER ST #18  
ARLINGTON, MA 02474

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Prop ID: 57.B-1-19  
Prop Location: 9 RYDER ST UNIT 19 Arlington, MA  
Owner: BALIJEPALLI SURYA  
Co-Owner:  
Mailing Address:  
568 NORTH RD  
SUDBURY, MA 01776

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Prop ID: 57.B-1-2  
Prop Location: 9 RYDER ST UNIT 2 Arlington, MA  
Owner: CASEY TERESAE C  
Co-Owner:  
Mailing Address:  
15 MARKET STREET  
BILLERICA, MA 01821

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Prop ID: 57.B-1-20  
Prop Location: 9 RYDER ST UNIT 20 Arlington, MA  
Owner: RAFI SHOWKAT A  
Co-Owner:  
Mailing Address:  
PO BOX 1134  
BURLINGTON, MA 01803

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Prop ID: 57.B-1-21  
Prop Location: 9 RYDER ST UNIT 21 Arlington, MA  
Owner: CHIN RUSSELL



Co-Owner:  
Mailing Address:  
17 PEARL STREET  
LEXINGTON, MA 02420

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Prop ID: 57.B-1-22  
Prop Location: 9 RYDER ST UNIT 22 Arlington, MA  
Owner: OWEN GERALDINE M ETAL/TRUSTEES  
Co-Owner: EDWARD R OWEN FAMILY TRUST  
Mailing Address:  
9 RYDER ST #22  
ARLINGTON, MA 02476

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Prop ID: 57.B-1-23  
Prop Location: 9 RYDER ST UNIT 23 Arlington, MA  
Owner: KIM JIN W & SUNGJA Y  
Co-Owner:  
Mailing Address:  
1 BLANCHARD RD  
CAMBRIDGE, MA 02138

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Prop ID: 57.B-1-24  
Prop Location: 9 RYDER ST UNIT 24 Arlington, MA  
Owner: CHHIM BETHANY K  
Co-Owner:  
Mailing Address:  
9 RYDER ST UNIT 24  
ARLINGTON, MA 02474

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---

Prop ID: 57.B-1-3  
Prop Location: 9 RYDER ST UNIT 3 Arlington, MA  
Owner: BUTTERS ARLENE  
Co-Owner:  
Mailing Address:  
9 RYDER STREET--UNIT 3  
ARLINGTON, MA 02476

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---

Prop ID: 57.B-1-5  
Prop Location: 9 RYDER ST UNIT 5 Arlington, MA



Owner: DOTALO CAROL A  
Co-Owner:  
Mailing Address:  
9 RYDER STREET #5  
ARLINGTON, MA 02476

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Prop ID: 57.B-1-6  
Prop Location: 9 RYDER ST UNIT 6 Arlington, MA  
Owner: YANG JIQIN/LUO GUOYING  
Co-Owner: TRS/THE YANG AND LUO TRUST  
Mailing Address:  
21 HERITAGE DRIVE  
LEXINGTON, MA 02420

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Prop ID: 57.B-1-7  
Prop Location: 9 RYDER ST UNIT 7 Arlington, MA  
Owner: OLIVER JEFFREY F & HOLLY H  
Co-Owner:  
Mailing Address:  
40 BURNHAM RD  
WINDHAM, NH 03087

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Prop ID: 57.B-1-8  
Prop Location: 9 RYDER ST UNIT 8 Arlington, MA  
Owner: GRAZIANO GERALD J  
Co-Owner:  
Mailing Address:  
59 THESDA STREET  
ARLINGTON, MA 02474

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Prop ID: 57.B-1-9  
Prop Location: 9 RYDER ST UNIT 9 Arlington, MA  
Owner: CHEN JERRY C  
Co-Owner:  
Mailing Address:  
18 DOUGLAS ROAD  
LEXINGTON, MA 02420

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### Section 3.2.17 Roster of Development Team

Below is a list of the Development Team Members with the Developer Qualifications and Development/Real Estate Consultant Resume, attached.

#### Development Team

Spaulding & Slye Investments

Prime Contact: Daniel St. Clair, Project Executive of Applicant's Development Manager

<http://ssinvests.com/>

Mirak Properties

Prime Contact: Julia Mirak Kew

Jones Lang LaSalle, Project Manager

Prime Contact: Paul Boutchia

<https://www.us.jll.com/en/locations/northeast/boston>

EHM Real Estate Advisor, Development Consultant

Prime Contact: Edward H. Marchant

Affordable Housing Lottery Agent

Prime Contact: To be Selected. Applicant will provide contact information in a supplement to this application.

Nutter, McClennen & Fish LLP, Attorney

Prime Contact: Jim Ward

<https://www.nutter.com/>

Krattenmaker O'Connor & Ingber P.C., Attorney

Prime Contact: Mary O'Connor

<http://www.koilaw.com/oconnor.htm>

Gamble Associates, Master Planner

Prime Contact: David Gamble

<https://www.gambleassoc.com/>

BH+A, Architect of Record

Prime Contact: Joel Bargmann

<https://bhplus.com/>

Bohler Engineering, Civil Engineer

Prime Contact: Jesse Johnson

<https://bohlerengineering.com/location/boston-ma/>

KZLA, Landscape Architect

Prime Contact: Kyle Zick

<https://www.kylezick.com/>



# Spaulding & Slye Investments



Spaulding  
& Slye Investments



# *Spaulding & Slye Investments (SSI)*

the principal investment arm of Jones Lang LaSalle Americas, Inc. (JLL)

Leveraging the strength and experience of the SSI team and JLL platform to identify, underwrite and execute attractive real estate investments on behalf of our investors and clients.

## Our mission:

- generating superior, risk-adjusted returns to our investors
- providing custom-tailored solutions to JLL clients
  - equity investment & separate account services
- wealth creation, employee retention & attraction

## Our advantages:

- investment acumen & execution capabilities
- flexible structure & entrepreneurial approach
- extraordinary resources of JLL



# 50+ years of excellence

---

1966

*Investment development  
company founded in Boston by  
Hank Spaulding & George Slye*

1985

*Evolution to a full service real  
estate company*

1992

*Windsor Realty Funds II & IV  
– DuPont Pension*

2005  
–  
2017

*Federal Partners Fund I, II, III  
& IV - CalSTRS*

2006

*Merge operations with Jones  
Lang LaSalle*

2012  
–  
present

*SSI Funds I, II & III*

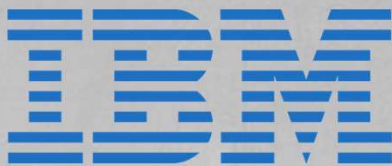
2018

*SSI Fund IV*



# The company we keep

CALSTRS®



MITRE



PROFIMEX®

JOHNS HOPKINS  
UNIVERSITY & MEDICINE



# *Knowledge advantage*

---

Breadth and depth of the JLL platform

Independent and **entrepreneurial** identity



Owner/Operator Platform

Strategic Relationships

Market Leading Research

Local Expertise



# Portfolio Experience

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## Individual Deals & Employee Fund Portfolio

- National
- Client: SSI / JLL employee & strategic private investors
- \$871M (60 buildings; 6.8 million SF)
- Employee co-investment vehicle with private institutional and corporate clients



## SSI Benefits

- Flexible execution and structuring capabilities
- Provides a capital resource and operating platform to facilitate client-driven occupancy requirements
- Leverages SSI's investment acumen and the resources of JLL to identify attractive, risk-adjusted investment opportunities for our investors





# Portfolio Experience

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## Bank Owned Portfolio

- Dallas, Los Angeles, Orlando
- Client: foreign bank
- \$210M (3 properties; 600 units)
- Unique features: troubled portfolio with fractured condominium projects taken back by lender



## SSI Benefits

- Developed an individual strategic plan for each asset
- Coordinated RFP process for all property teams including leasing, property & HOA management, investment sales and retail sales
- Oversaw entire sales processes of all assets using different strategies to maximize value; included bulk condo sales for two assets and retail sell-out of individual units at one asset





# Portfolio Experience

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## Federal Acquisition Partners

- National
- U.S. Federal Government-leased office buildings
- Client: California State Teachers Retirement System (CalSTRS)
- \$495M (15 properties; 2.4 million SF)
- Unique features: 4 tranches to the fund with different return requirements; significant and specific reporting requirements by CalSTRS



## SSI Benefits

- Relationships with government-leasing experts and JLL Research helped guide the strategy for each fund, adopting different requirements for returns, tenancy, etc.
- Managed relationships with other GSA building owners to create opportunities for both acquisitions and sales outside of normal marketing channels
- Institutional reporting on property and portfolio pursuant to CalSTRS stringent requirement for reporting on its larger investment portfolio



# Portfolio Experience

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## Windsor Realty Funds

- East Coast, Chicago, Texas
- Suburban office
- Client: Domestic Pension Fund and General Investment & Development
- \$530M (22 assets; 50 buildings; 4.8 million SF)
- Unique features: geographically diverse portfolio



## SSI Benefits

- Leverages JLL service platform for market research including leasing trends, tenant information and movements in capital markets
- Leveraged operational experience of SSI team and JLL platform to maximize operating efficiencies
- Pension fund reporting





# Portfolio Experience

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## Private Client Portfolio

- New York, Chicago, California
- Class A office, industrial and retail
- Client: Private Investor
- \$950M (6 assets; 1 million SF)
- Unique features: diverse portfolio by asset type, location and scale



## SSI Benefits

- SSI utilizes JLL research capabilities to educate client on the markets in which they are invested so that they can make informed decisions
- Assisting client to develop a comprehensive strategy for their existing portfolio and potential growth
- Identifying and running acquisition process for select, new core investments
- Flexibility to coordinate with client's multiple advisors to execute business plan for each asset





# *Representative Transactions*



# Office Experience

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## *4085 Campbell Avenue*

**Menlo Park, CA**  
**65 % leased, new, 60K SF Class A office building**

### Strategy

- + Align client need with SSI acquisition
- + Gain control of asset & structure mutually agreed-upon lease terms prior to acquisition

### Status (Sold September 2015)

- + Simultaneous close acquisition and 10-year, NNN lease
- + Free rent, signage and above market TI



## *150 S. Warner Road*

**King of Prussia, PA**  
**100% occupied, 151K SF Class A office building**

### Strategy

- + Actively manage tenant rollover to maximize revenues, 48 month hold period
- + Assess and implement building amenity improvement projects
- + Upside potential to drive rent on rolling leases

### Status (Acquired September 2016)

- + Executed lead tenant early renewal
- + Navigated anticipated tenant bankruptcy and released significant portfolio



# Industrial Experience



## Cabot Industrial

**Mansfield, MA**

**98.6% leased industrial park, 1.8M SF, 15 buildings**

### Strategy

- + Acquire below replacement cost
- + Add value through capital improvements program, tenant relations and bring to market rents across the portfolio
- + Optimize value through early sale of non-strategic portfolio components

### Status (Sold January 2020)

- + Sold all non-strategic assets above proforma early in hold period; leasing pace and terms exceeded original underwriting
- + Sold interest in core holdings in January 2020
- + Exceeded return expectations with a project level 26.7% LIRR



## 8435 Lee Highway

**Merrifield, VA**

**2.3 acre industrial site with vacant 27K SF flex office building**

### Strategy

- + Align client need with SSI acquisition
- + Gain control of asset & structure mutually agreed-upon lease terms prior to acquisition

### Status (Sold May 2014)

- + Simultaneous close acquisition, debt financing and 20-year, NNN lease
- + Effective long-term control, amortized TI's
- + Exceeded investor return expectations achieving a project level 56.5% LIRR



# Multifamily Experience



## Peters Street Lofts

**Atlanta, GA**  
**3.12 acre land development, 115 unit MF project**

### Strategy

- + Acquire at below market land basis
- + Manage the development and construction to substantially complete the project in 14 months
- + Lease an average of 11 units per month at an average monthly rate of \$1.63 PSF (35% below luxury high rise pricing), stabilizing at 96% occupancy 10 months post delivery

### Status (Acquired December 2017)

- + Secured all project permits and entitlements. Construction completed in 2019.



## Quail Valley

**Charlotte, NC**  
**232-unit, garden style apartment community**

### Strategy

- + Reposition the stabilized asset through moderate renovations and increasing the below market rents
- + Complete renovations over first 24 months of ownership, stabilize the property and sell within 3 – 4 years, or 1 – 2 years post re-stabilization

### Status (Sold April 2016)

- + Sold asset mid-way through renovations to capitalize on investor demand and market conditions



# Multifamily Experience

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## *45 West Third Street*

**Boston, MA**  
**1 acre site, existing industrial building**

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### Strategy

- + Engage with owner and enter into land contract with study and purchase options
- + Re-entitle site for higher and better use; multifamily with ground floor retail

### Status (Sold April 2016)

- + Secured zoning and prepared development plans with architecture partner
- + Sold purchase option to developer after a three year period



# Mixed-Use Experience



## Fan Pier

**Boston, MA**  
**21-acre, 3M SF mixed-use development**

### Strategy

- + Managed development of 21-acre, first class, mixed-use waterfront project by Hyatt Development Corporation to create new neighbourhood, enhancing public access to the Boston waterfront
- + Developed master plan, created schedule and budget, in-depth equity/debt analysis, consultant selection, strict regulatory environment, developed relationships with community and officials, provided market and sales strategy

### Status (Completed)

- + Significantly increased value of site by completing all permitting for master plan



## Russia Wharf

**Boston, MA**  
**2.2 acre, 500K SF mixed-use development**

### Strategy

- + Maximize highest and best use to reflect then changing section of Boston driven by Rose M. Kennedy Greenway and Fort Point Channel access and improvements
- + Included first class office space, 200 residential condos, ground-floor retail, outdoor public space and docking facility

### Status (Completed)

- + Completed complex permitting, preconstruction and underwriting; asset sold off post-entitlements.



# Mixed-Use Experience



## Federal Gateway

**Washington, DC**  
**10-story, 300K SF mixed-use development**

### Strategy

- + Joint venture with property owner to develop office and retail in support of NavSea relocation to the US Navy Yard.
- + Take advantage of limited private development offerings and prior success in the submarket.
- + Located directly across from the Southeast Federal Center, DOT, NavSea HQ and Metro station

### Status (Completed)

- + Pre-leased to 70% prior to construction start including 100% of retail to CVS, Five Guys, and Chevy Chase Bank
- + Leased to 100% and sold to JV partner within 36 months.



## Memorial Drive

**Cambridge, MA**  
**Multi-phase, 600K SF mixed-use development**

### Strategy

- + 6-acre mixed-use headquarters renovation and campus redevelopment; joint venture with Polaroid
- + Master planned, developed, and managed construction of two first-class biotech buildings
- + Constructed 120 units of low-rise housing and below-grade parking
- + Constructed and sold office, laboratory, and residential space

### Status (Completed)

- + Renovated office building sold to investor for \$35M and pre-sold residential development to Harvard University



# *Flex / Lab / R&D Experience*



## *255 & 261 Ballardvale*

**Wilmington, MA**  
**2 buildings, 85K SF office and lab**

### **Strategy**

- + Assist client with liquidity challenges and desire for long term control
- + Assignment of existing tenant purchase option in exchange for new lease terms providing them with future fixed and market-based purchase options
- + 36 month hold, sell with residual term

### **Status (Sold February 2015)**

- + Simultaneous close acquisition, debt financing and 10-year, NNN lease



## *900 Middlesex & 1&3 Strathmore*

**Billerica and Natick, MA**  
**3 buildings, 122K SF office and lab**

### **Strategy**

- + Off-market opportunity from corporate owners/user allowed for control and favourable due diligence period
- + 900 Middlesex in Billerica was vacant at time of acquisition; 1 & 3 Strathmore had short-term sale leaseback
- + High quality lab product in market experiencing extreme supply/demand imbalance created by the growth of biotechnology industry

### **Status (Sold January 2020)**

- + Signed full building 11+ year lease at 900 Middlesex



# Contacts

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EDWARD MARCHANT  
EHM/Real Estate Advisor

Ed Marchant has been actively involved with the development of residential and commercial real estate over the past fifty years. As Director of Development at GBCD, Inc., now known as The Community Builders (TCB), Mr. Marchant worked with a wide range of community-based housing sponsors in the development of numerous affordable and mixed-income housing projects throughout Greater Boston. His involvement with mixed-income housing and public housing continued as a Vice President at John M. Corcoran & Co., where he also worked on several commercial projects. As an independent real estate advisor since 1990, Mr. Marchant has worked with a variety of private, public, and institutional clients on assignments ranging from the development of a single project to the planning and development of large scale, mixed-use projects.

Mr. Marchant has been actively involved with one hundred and eighty one (181) Chapter 40B Comprehensive Permit projects in Massachusetts where he has advised both developers and local Zoning Boards of Appeals. A list of the Massachusetts communities where Marchant has been an advisor on 40B projects is attached.

A graduate of Cornell University and Harvard Business School, Mr. Marchant served as an Adjunct Lecturer in Public Policy at Harvard Kennedy School for forty years where he taught courses, jointly offered at the Harvard Graduate School of Design (GSD), on real estate development and finance and on the development, financing and management of mixed-income and affordable housing. He continues to teach his jointly offered affordable and mixed-income housing course as a Lecturer at GSD, where he also teaches in several Executive Education programs.



## **Edward Marchant's Chapter 40B Comprehensive Permit Experience**

### **Provided or Providing Technical Assistance to Zoning Boards of Appeal and/or Public Agencies (51 Municipalities / 113 Projects)**

Andover	Marblehead (2)
Ashland	Marlborough
Barnstable (3 developments)	Merrimac
Bedford (3)	Methuen (4)
Bolton (4)	Millis
Bridgewater (6)	Nantucket (5)
Dedham (2)	Norwood
DHCD (Hingham)	Revere
Dighton (5)	Rutland (2)
Dover (3)	Saugus (4)
Easton (4)	Seekonk (2)
Falmouth	Sharon
Foxborough (3)	Southborough (3)
Georgetown (2)	Stoughton (2)
Gloucester	Sturbridge
Hanover (2)	Sudbury (6)
Harvard (2)	Swampscott
Harwich	Taunton
Hudson (4)	Townsend
Ipswich (4)	Waltham (2)
Lancaster	West Boylston
Lexington	Westminster
Littleton (4)	Winchester
Lynnfield	Winthrop
Manchester-by-the-Sea	Yarmouth (2)
Mansfield (4)	

### **Provided or Providing Development Consulting Services on Potential Chapter 40B Projects (48 Municipalities / 68 Projects)**

Acton (3 developments)	Norfolk (2)
Andover	North Andover
Arlington	Norwood
Ashland	Oxford
Bellingham	Pepperell
Billerica (2)	Plainville (2)
Burlington	Plymouth
Brookline (5)	Reading
Chelmsford (6)	Salisbury
Cohasset	Sharon
Dartmouth	Sherborn
Dracut (3)	Sterling
Duxbury (2)	Stoneham
Easton	Tewksbury
Falmouth	Tyngsborough
Hopkinton	Upton
Ipswich	Wakefield (2)
Littleton	Walpole
Marshfield	Wareham
Medford	Watertown
Merrimac	Weston
Middleborough	Westford (2)
Milford	Woburn (2)
Newton	Wrentham



### Section 3.2.16 Compliance with Master Plan

The Project was designed in accordance with the goals and policies set out in the Master Plan adopted by the Arlington Redevelopment Board on February 4, 2015 (hereinafter referred to as the “Master Plan”). One of the professionals involved in the creation of the Master Plan, David Gamble of Gamble Associates, LLC, an urban design and planning firm, was and is integrally involved in the design of the Project. Further, the Project as proposed, comports with the goals and objectives of the Town’s Housing Production Plan and the Open Space and Recreation Plan 2015-2022 – Goals and Objectives.

#### **Land Use, Housing and Traffic Circulation**

The Project is a mixed-use development that includes 25% affordable housing units on Massachusetts Avenue, a well-established commercial area. The one hundred thirty (130) units contain a mix of studios, one, two and three bedrooms for a range of incomes, family sizes and needs. In the Housing Production Plan prepared by the Metropolitan Area Planning Council and adopted by the Select Board and Arlington Redevelopment Board in 2016, the Council concluded that it was a priority to integrate affordable units in a range of housing types into the fabric of Arlington’s existing neighborhoods through redevelopment of certain underutilized properties and reuse of existing buildings. This Project comports with this conclusion. In fact, the Council specifically identified 1165R Massachusetts Avenue as such a location.

The Project will preserve the “streetcar suburb” character of Arlington’s residential neighborhoods by its integration into the fabric of Massachusetts Avenue and the availability of public transportation and bicycle access to Massachusetts Avenue and the Minuteman Bike Way. Additionally, the walking trail proposed along the Mill Brook and the residential amenity space proposed for the Project provide for social interaction, a sense of community and a neighborhood experience. The interior and exterior amenity space will provide ample space for residents to meet, play and grow.

As set out in the detailed and thorough traffic impact report prepared by Nitsch Engineering, the proposed project will result in a negligible increase in traffic, the roadways will safely, adequately and efficiently manage the flow of traffic in and out of the site and most importantly, the developer will maximize other modes of transportation, including the use of bicycles, ride sharing and public transportation. As detailed in the Nitsch Engineering traffic impact report, the Project was designed to: (a) enhance mobility; (b) increase safety by maximizing transit, bicycle and pedestrian access; and (c) enhance bicycle connectivity.

In the Master Plan, the committee concluded that: (a) the Massachusetts Avenue corridor has the capacity for growth, particularly mixed-use growth and is accessible to neighborhoods throughout the Town; (b) the Town’s growth management priorities must include Massachusetts Avenue and the Mill Brook area; (c) the Town has a limited number of developable parcels of which this site is one; and (d) Mill Brook has the potential to result in transformative change, as evidenced by the enhancements for the area proposed by the developer. Master Plan, p. 8.

The Project will be particularly attractive to people who work in Cambridge and Boston given the availability of bus service on Massachusetts Avenue. The Project is also attractive to seniors, who will find its proximity to restaurants, grocery stores, personal service shops and medical providers’ offices convenient and easily accessible. The mix of residential units will appeal to seniors who are looking to



downsize and remain in Arlington, to families and to lower income households that would qualify for the affordable units.

Moreover, the Project provides seniors and those with physical or cognitive disabilities that require single-story and barrier-free residences, accessible space to live and enjoy their homes. This Project will be entirely handicapped accessible and ADA compliant.

As noted in the Master Plan, housing diversity and affordability are essential to a well-rounded economy. Redevelopment opportunities such as the Project, which includes Work Bar, which is adjacent to the Project at 1167 Massachusetts Avenue and provides remote workspace and offices, is an appropriate fit with the Project and provides an advantageous redevelopment opportunity. Master Plan, p. 105. The availability of Work Bar will afford residents of the Project the ability to live and work onsite.

### **Historical and Cultural Features**

The Project will be repurposing certain of the existing historic structures in this former mill site. Specifically, the developer proposes to retain two of the existing mill buildings and repurpose them for housing. Two buildings onsite are not adaptable for reuse due to wood-boring insect damage and low ceiling heights that do not comply with code requirements.

The development of the site will enhance the Mill Brook area by, among other things, removing structures presently covering the brook and showcasing the beauty of the Mill Brook by creating a walking trail and providing informational markers, detailing the history of the Mill Brook during the height of the industrial period in Arlington. The Mill Brook Corridor Study Group, a subcommittee of the Master Plan Committee, outlined several priorities and recommendations to improve the Mill Brook area, including reducing surface areas covered by pervious materials, identifying new opportunities for access to Mill Brook creating safe, accessible and attractive walking paths and gathering areas along the Mill Brook corridor as development opportunities arise, expanding and improving connections between Minuteman Bike Way and various corridors and implementing landscaping improvements near the Mill Brook.

The Project incorporates the priorities and recommendations suggested by the Mill Brook Corridor Study Group.

The Project as designed, protects and enhances the physical beauty of the Mill Brook. The substantial improvements along the Mill Brook will provide recreational space and connectivity to the Minuteman Bike Way for residents.

### **Sustainability and Environmental Features**

This Project will incorporate many sustainable construction features, including without limitation:

- Prefabrication of wood wall panels to improve efficiency and reduce waste.
- Prefabricate sheet metal ductwork
- Prefabricate plumbing systems where possible.
- Separation of recycled materials at the transfer stations in lieu of multiple dumpsters, etc.
- Scheduling and coordination of subcontractors to increase efficiency and avoid re-mobilizations, etc.
- Promote worker carpooling to reduce vehicle emissions and reduce on-site parking constraints.
- Incorporate and monitor SWPPP plans and activities on-site.
- Incorporating recycled products for building materials



- Protect building and materials from potential moisture issues
- Indoor air quality management including temporary construction filters and covering open-ended ductwork as noted below.
- No smoking will be permitted in or adjacent to the buildings
- Provide adequate air movement when required for construction activities requiring proper ventilation.
- Keep jobsite maintained and free from trash, construction debris and limit dust levels.

END OF SECTION



1165R Massachusetts Avenue

Ch. 40B ZBA Submission

### Section 3.2.15 Impact on Municipal Services

Please see the enclosed Fiscal Impact Analysis, prepared Fougere Planning & Development, dated October 12, 2020.



# 1165R MASS. AVE

## FISCAL IMPACT ANALYSIS ARLINGTON, MA

PREPARED FOR:

1165R MASS MA PROPERTY LLC

C/O



Spaulding  
& Slye Investments

SPAULDING & SLYE  
INVESTMENTS  
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**FISCAL IMPACT ANALYSIS**  
**1165R Massachusetts Avenue**

**October 12, 2020**

**I. Introduction**

Fougere Planning and Development has been engaged by Spaulding and Slye Investments to undertake a Fiscal Impact Analysis to estimate new revenue the Town of Arlington may realize, as well as to evaluate the potential increased service demand costs that may occur, from the development of a 130-unit apartment community proposed at 1165R Massachusetts Avenue. As a 40B development, 25% percent of the residences will be designated as Affordable and restricted to households earning up to 80% of the Area Median Income. A majority of the units, 65.3%, will be studio and one-bedroom units which generate few school age children. The 2-acre site is currently occupied by a former mill which will be fully refurbished into housing units. A parking garage will be incorporated into the design and the site will accommodate 135 parking spaces. The site will be serviced by public utilities. All on-site parking areas and trash pickup will be privately managed and maintained. Table One outlines the proposed apartment unit mix.

Table One  
Residential Unit Types

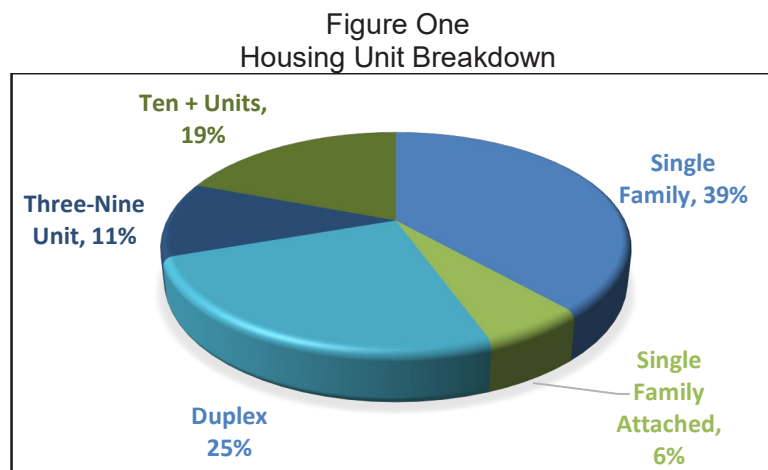
Unit Type	Market	Affordable	Total
Studio	23	8	31
One Bed	41	14	55
Two Beds	23	8	31
Three Beds	10	3	13
<b>Total</b>	<b>97</b>	<b>33</b>	<b>130</b>



## II. Local Trends

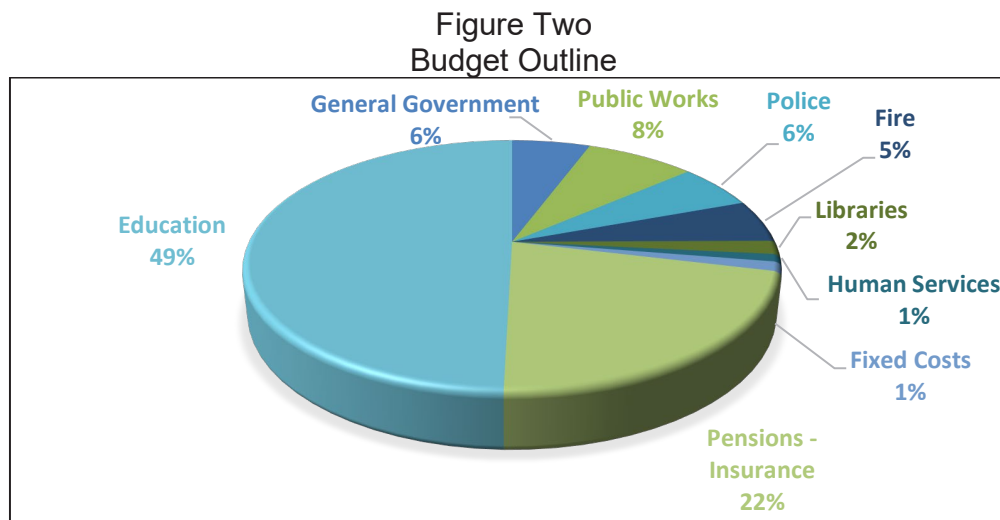
Census figures report that from 2000 to 2010 Arlington's population rose from 42,410 to 42,844, representing a 1.1% increase over the 10-year period. The Census Bureau estimates the 2019 population to be 45,531.

A majority of Arlington's housing stock consists of single family homes. The most recent Census data (2018) reports indicate that out of a total of 18,780 housing units in the community, 7,136 are single family as outlined in Figure One.



## Budget

Schools, along with the fire and police departments will realize the most direct and measurable increase in service demands from the proposed project. These departments, as detailed in Figure Two, show some of the largest cost centers in the community and therefore will be the focus of this analysis.





### III. Per Capita Methodology & Marginal Cost Approach

There are a number of methodologies that are used to estimate fiscal impacts of proposed development projects. The Per Capita Multiplier Method is the most often used analysis to determine municipal cost allocation. This method is the classic “average” costing method for projecting the impact of population growth on local spending patterns and is used to establish the costs of existing services for a new development. The basic premise of this method is that current revenue/cost ratios per person and per unit is a potential indicator of future revenue/cost impacts occasioned by growth. New capital expenditures required for provision of services to a development are not added to current costs; instead, the present debt service for previous improvements is included to represent ongoing capital projects. The advantage of this approach is its simplicity of implementation and its wide acceptance by both consultants and local officials. The downside of this approach is that the methodology calculates the “average” cost as being the expected cost, which is often not the case and costs can be understated or exaggerated; significantly in some instances. If one student is added to a school system, limited cost impacts will occur; however, based on an “average” cost to educate one student the cost would be noted as \$18,000/year which includes such costs as existing debt, building maintenance, administrative and other factors, all of which will be minimally impacted by the addition of one student. The “true cost” could be significantly less, especially in those communities with declining enrollment.

The Marginal Cost Approach is a more realistic methodology that can be used to estimate and measure developmental impacts based on actual costs that occur in the community. At this time, a “level of service” exists in Arlington to serve the community. This existing service level, for the most part, addresses the needs of the community through existing tax collections. As new development occurs, pressures are placed on some departments to address increased demands, while other departments see negligible, if any impacts. In reviewing the potentially impacted town departments specifically, a truer picture of anticipated cost impacts can be determined.

Given the nature of the proposed development project, as will be shown by the analysis below, few significant impacts will be felt by Town departments. Any required off-site road improvements will be addressed during the approval process. Solid waste generated by this project will be removed by a private hauler. Any construction related or operating utility expenses will be offset through user fees. All on-site improvements will be private and all maintenance expenses will be paid for by this project owner. This report does not intend to infer that few costs will be incurred as a result of this project. Measurable impacts will



certainly be felt by a few Town departments, most notably the School Department along with the Police and Fire Departments. Other town agencies will see little or no measurable impacts.

#### IV. Local Revenues From Development

##### 1) Property Taxes

Local property taxes provide the bulk of General Fund Revenue for the Town, with Fiscal 2019 figures showing that 76.8% will be generated from this revenue source, with the remaining income being received from State Aid, Local Receipts and other sources. The Fiscal Year 2020 Tax Rate is \$11.06.

Based on a review of area market conditions and preliminary rent levels, it is estimated that the proposed apartment development will have an estimated assessed value of \$47,060,000. As outlined in Table Two, property tax revenues are anticipated to equal \$520,484 annually. This assessment estimate will raise total Town property values<sup>1</sup> by 3.6%.

Table Two Anticipated Property Tax Revenue		
Estimated Assessment	Tax Rate	Property Taxes
\$47,060,000	\$11.06	\$520,484

##### 2) Excise Tax Revenue

Another major revenue source for the community is from motor vehicle excise taxes. In fiscal year 2019, the Town received a total of \$4,551,000<sup>2</sup> from this revenue source. Table Three outlines the projected excise tax revenue stream for the proposed project, which is estimated to be \$65,000 annually.

Table Three Motor Vehicle Excise Taxes	
Avg. Car Value	\$20,000
Total Cars <sup>3</sup>	130
Total Value	\$2,600,000
Excise Rate	\$25/\$1,000
<b>Est. Excise Taxes</b>	<b>\$65,000</b>

<sup>1</sup> Total town assessment \$12,844,504,979, FY2020 Tax Class. Hearing Dec. 2, 2019

<sup>2</sup> 2020 Budget document, 2019 revenue.

<sup>3</sup> 1 vehicle per unit.



### 3) Community Preservation Surcharge Revenues

The Town of Arlington participates in the Massachusetts Community Preservation Act (CPA) with a surcharge to 1.5% on the total property taxes paid. Based on the estimated property taxes from the proposed redevelopment, the CPA surcharge revenue is estimated to be \$7,807 annually as outlined in Table Four.

Table Four		
Estimated CPA Revenue		
CPA	Property Taxes	Estimated CPA Revenue
1.5%	\$520,484	\$7,807

### 4) Total Project Revenues

The proposed development is expected to generate \$593,291 in annual revenue from both property tax and vehicle excise taxes detailed in Table Five.

Table Five	
Estimated Gross Revenue	
Estimated Property Taxes	\$520,484
Estimated Excise Taxes	\$65,000
CPA Surcharge	\$7,807
<b>Total Est. Revenue</b>	<b>\$593,291</b>

Other income sources were reviewed for this analysis but were not included in the revenue figures. The Town receives state aid from a number of sources based upon each town's population and school enrollments. The anticipated new residents will create demand for local retail and other services, thereby creating a positive impact on the local economy. In addition, one- time building permit fees are estimated to be \$375,000, and the construction economy will be enhanced from this new development project.

## V. Department Impacts

As noted above, the Police, Fire and School Departments account for a significant percentage of the Town's operating expenses. These Departments employ the largest number of personnel and have the most dramatic impact on the Town's budget. Given the large budgetary impact these Departments have on the Town, they are closely analyzed in this Report.



## Police & Fire

Both the Police and Fire Departments will see an upturn in activity from the proposed residential community, with increased demand for services being attributed to the new project. To gain a firm understanding of the degree of impact this project may have on these departments, over 2,900 40B apartment units were analyzed as to the emergency call volume generated by these land uses; two Arlington<sup>4</sup> apartment complexes were also reviewed. The data was calculated to arrive at an average emergency call ratio per unit, which was then used to generate projected emergency calls for each department. Extrapolating from the comparable call data, slight increases are projected in the Town's Police and Fire Departments call volume. Table Six outlines the findings from this research.

Table Six  
Estimated Annual Police-Fire-Ambulance Emergency Calls<sup>5</sup>

Agency	Avg. Call Per Unit	Proposed Apartments	Estimated Calls
Police	0.377	130	49
Fire	0.068	130	9
Ambulance	0.105	130	14

## Police Department

Police Department calls are estimated to increase by 49 calls annually or slightly less than 1 call per week. To put the call volume into perspective, the Department received approximately 27,649 calls<sup>6</sup> in 2019 (531 per week). The Police Department's Fiscal Year 2019 Budget was \$8,305,143.

To gain an understanding of the impact of this project on the Police Department, we discussed the project with Police Captain Jim Curran. The Captain believed the estimated calls were reasonable and did not feel these new calls would impact operations or the Department's ability to respond to the proposed complex. The Captain did note the Department is down 6 officers at this time and efforts are presently underway to fill those vacancies.

In order to account for some costs related to the new use, a number of options were reviewed including department cost per capita and per housing unit. As emergency calls are a reliable metric that provides a more realistic measure of demand for service, we will

<sup>4</sup> Both Arlington apartment complexes have less than 25% affordable units, Arlington 360: 10% & Brigham Square 14%.

<sup>5</sup> Complete list of emergency call data to apartment complexes is provided in Appendix.

<sup>6</sup> 2019 Town Report, Calls for Service. In 2018 there were 29,880 calls for service.



use this average costing method to allocate costs to the apartment use. Dividing the Police Budget by annual calls generates a cost per call. This cost is then multiplied by the estimated calls from the apartment neighborhood, resulting in an estimated cost of \$14,749 as outlined in Table Seven.

Table Seven  
Estimated Police Department Costs

Budget	Police Calls	Cost Per Call	Est. Calls	Est. Cost
\$8,305,143	27,649	\$301	49	\$14,749

## Fire Department

A much more modest call volume increase is anticipated for the Fire Department, with 9 fire calls and 14 ambulance calls projected, for a total of 23 calls annually (.44 calls per week). In 2019 the Department responded to 5,046 incidents<sup>7</sup> (97 calls per week), with 3,183 being noted as EMS. The Departments 2019 operating Budget was \$7,866,146.

We discussed the project with Fire Prevention Deputy Ryan Melly. The Deputy thought the estimated calls were reasonable. The proposed project would improve access to the old site, including removing a section of the building that presently connects two buildings on the second level and restricts access because of its limited height above the ground. The Deputy did not see any issues related to the ability to properly respond to incidents at the proposed complex. Staffing levels have remained stable.

As with the Police Department, in order to account for some cost impacts, we calculated the cost per Fire Department call to arrive at a gross operational cost as outlined in Table Eight.

Table Eight  
Estimated Gross Fire Department Costs

Budget	Fire Calls	Cost Per Call	Est. Calls	Est. Cost
\$7,866,146	5,046	\$1,558	23	\$35,834

Ambulance income is a source of revenue generating \$424,000 in 2019, or \$133 per call<sup>8</sup>. As outlined above, the new apartment complex is estimated to generate 14 annual EMS calls, resulting in \$1,862 in revenue. Deducting these funds from the gross estimated cost, results in a net Fire Department expense of **\$33,972**.

<sup>7</sup> 2019 Town Report, in 2018 5,553 calls were reported (3,177 EMS).

<sup>8</sup> 2019 EMS calls 3,183.



## Other Town Departments

Given the minimal impacts associated with the proposed apartment complex on other Town Departments, few additional financial impacts are anticipated. All trash and snow removal will be privately maintained. Building permit fees are estimated to be \$375,000 (\$20 per \$1,000 up to \$15,000,000, then \$5 per \$1,000) which will more than offset cost impacts to the Building Department. To assign some costs to miscellaneous expenses that may incur to the Town, we have allocated a general government impact of \$10,000 for this project.

## School Department

The School Department's budget is the largest in the Town, with a Fiscal 2020 budget of \$71,427,139, representing 49.5% of the Town's total budget. As previously outlined, the proposed apartment complex will total 130 units, with 66.1% consisting of studios and one bedroom units as detailed in Table Nine.

Table Nine Residential Unit Types			
Unit Type	Market	Affordable	Total
Studio	23	8	31
One Bed	41	14	55
Two Beds	23	8	31
Three Beds	10	3	13
<b>Total</b>	<b>97</b>	<b>33</b>	<b>130</b>

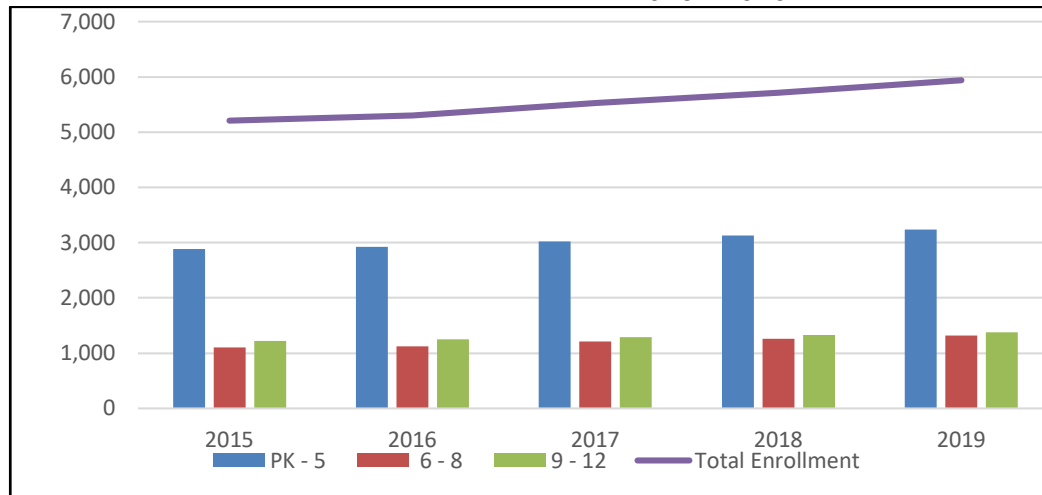
## Schools and Enrollment

Arlington's school enrollments have been growing over the last five years and as outlined in Table Ten and Figure Three, all grade level groupings have seen increases. The middle school has experienced the largest percentage increase over this time period. A new high school is presently under construction and is expected to be completed in 2024. The new building will have a capacity of 1,755 students.

Table Ten School Enrollments 2015 - 2019						
	2015	2016	2017	2018	2019	% Change
<b>PK - 5</b>	2,884	2,924	3,026	3,128	3,241	12.38%
<b>6 - 8</b>	1,107	1,127	1,208	1,258	1,318	19.06%
<b>9 - 12</b>	1,217	1,253	1,290	1,325	1,380	13.39%
<b>Total</b>	<b>5,208</b>	<b>5,304</b>	<b>5,524</b>	<b>5,711</b>	<b>5,939</b>	<b>14.04%</b>



Figure Three  
School Enrollment Trends 2015 - 2019



The proposed development will consist of a major renovation to an existing mill building and includes a mix of studio, one, two and three bedroom apartment units, with 25% set aside as affordable (as required by 40B provisions). Based on our database of over 3,700 40B apartment units in the region as detailed in Table Eleven, we are estimating that the proposed development will generate an average of 26 school age children (SAC) annually. As noted above, 65% of the units will be studio and one-bedroom units that generate few school age children. Two local apartment developments were also reviewed, but they do not contain 25% affordable units (Arlington 360: 10% and Brigham Square: 14%). Based on two Arlington apartment enrollment profiles<sup>9</sup>, it is anticipated that approximately 67% of the students will be of elementary school age.

Table Eleven  
Estimated Enrollment Profile

PK - 5	67.16%	17
6 - 8	16.42%	4
9 - 12	16.42%	4

<sup>9</sup> Arlington 360 & Brigham Square



Table Eleven  
Estimated School Age Children

Complex	Total Units	SAC	SAC/ Unit
Arlington 360 - Garden	256	26	0.102
Brigham Square	119	32	0.269
	375	58	0.155
Pembroke - Woods	240	49	0.204
Bedford Village at Taylor Pond	200	39	0.195
Avalon at Bedford Center	139	52	0.374
North Andover - Berry Farms	196	49	0.250
Heritage at Bedford Springs	164	63	0.384
Hingham Avalon Shipyard - Garden	86	12	0.140
Newton (Three Complexes)	678	239	0.353
Charles River Landing (Needham)	350	28	0.080
Cirrus Apartments Ashland	398	40	0.101
Westwood Gables	350	43	0.123
Lincoln Woods	125	34	0.272
Quinn 35 Shrewsbury	250	16	0.064
Cloverleaf Natick	183	32	0.175
Avalon Natick	406	46	0.113
Total Averages	3,765	742	0.197
<b>Arlington Mill</b>	<b>130</b>	<b>26</b>	

To obtain a full understanding of potential school system impacts, the Consultant discussed the project's program and findings with the School Department's Chief Financial Officer Michael Mason. Based upon the estimated enrollment, Mr. Mason believed carrying an expense of \$10,463 per pupils was reasonable. This cost is based on the Town's current 5-year plan and formula to fund the school department; 25% of fixed costs such as administration, facilities and other indirect costs were removed to arrive at the per student expense. Given these costs considerations, total school expenses are estimated to be \$272,038, as outlined in Table Twelve.

Table Twelve  
Average Estimated School Costs  
26 Students x \$10,463 per = \$272,038



## SUMMARY

As outlined below in Table Thirteen, this fiscal impact analysis indicates that there will be a net positive revenue impact related to construction of the proposed development.

Table Thirteen Fiscal Summary	
Gross Projected Revenues	\$593,291
Total Municipal Costs	
Police	-\$14,749
Fire	-\$33,972
Other General Fund Impacts	-\$10,000
Schools	-\$272,038
Total Costs	-\$330,759
<b>Net Positive Fiscal Impact Range</b>	<b>+\$262,532</b>

Key findings supporting this development include:

- ✚ The proposed apartment complex will generate approximately \$593,291 in gross revenues per year. Taking into consideration estimated municipal costs, the proposed project will yield a positive net revenue of \$262,532 annually.
- ✚ The site's estimated assessed value will increase substantially from \$3,522,400 to \$47,060,000, increasing total community property values by 3.6% and residential property values by 4.12%.
- ✚ Property taxes will increase 1,217%; rising from \$39,525 to \$520,484.
- ✚ Twenty-five percent, 31 units, of the 130 apartments will be set aside as affordable units in perpetuity.
- ✚ All on-site maintenance and trash collection will be private.
- ✚ Calls to the Police Department are projected to increase by 49, compared with an annual Town wide call volume of 27,649.
- ✚ The Fire Department is expected to receive approximately 23 calls a year from the proposed apartment complex, adding to the 5,046 calls a year that are presently received by the Department.
- ✚ It is estimated that 26 school age children will live at the apartment complex.
- ✚ Both short-term and long-term positive economic benefits are anticipated to occur, with construction related jobs being created and local business activity enhanced with new residents living in the community.
- ✚ Building permit fee revenue is estimated to be \$375,000.



## Appendix

### Estimated Annual Police Calls

Project	Town	Units	Avg. Police Calls Per Year	Avg. Calls Per Unit	Projected Yearly Calls
Arlington 360	Arlington	274	62	0.226	
Brigham Square	Arlington	119	24	0.202	
Lynnfield Commons	Lynnfield	200	73	0.365	
The Lodge	Foxborough	250	74	0.296	
Union Place	Franklin	297	73	0.247	
Fairfield Green	Mansfield	200	146	0.728	
Pembroke Woods	Pembroke	240	92	0.385	
Blue Hills	Randolph	274	148	0.540	
Avalon Newton Highlands	Newton	294	153	0.520	
Avalon Chestnut Hill	Newton	204	67	0.328	
Arborpoint Woodland	Newton	180	22	0.120	
Cloverleaf	Natick	183	82	0.448	
The Gables	Westwood	350	155	0.442	
Hastings Village	Wellesley	52	3	0.058	
<b>Average Totals</b>		3,117	1,174	<b>0.377</b>	
<b>1165R Mass. Ave.</b>		<b>130</b>			<b>49</b>



## Estimated Annual Fire/EMS Calls

Project	Town	Units	Avg. Fire Calls Per Year	Avg. Calls Per Unit	Estimated Yearly Calls
Arlington 360	Arlington	274	12	0.044	
Brigham Square	Arlington	119	6	0.050	
The Lodge	Foxborough	250	26	0.105	
Union Place	Franklin	297	19	0.063	
Fairfield Green	Mansfield	200	43	0.213	
Pembroke Woods	Pembroke	240	9	0.036	
Blue Hills	Randolph	274	10	0.035	
Avalon Newton Highlands	Newton	294	26	0.088	
Avalon Chestnut Hill	Newton	204	11	0.053	
Arborpoint Woodland	Newton	180	12	0.064	
Cloverleaf	Natick	183	7	0.038	
The Gables	Westwood	350	17	0.049	
Hastings Village	Wellesley	52	2	0.031	
<b>Average Totals</b>		2,917	198	<b>0.068</b>	
<b>1165R Mass. Ave.</b>		<b>130</b>			<b>9</b>

Project	Town	Units	Avg. EMS Calls Per Year	Avg. Calls Per Unit	Estimated Yearly Calls
Arlington 360	Arlington	274	14	0.051	
Brigham Square	Arlington	119	8	0.067	
The Lodge	Foxborough	250	24	0.096	
Union Place	Franklin	297	44	0.148	
Fairfield Green	Mansfield	200	25	0.123	
Pembroke Woods	Pembroke	240	70	0.293	
Blue Hills	Randolph	274	28	0.101	
Avalon Newton Highlands	Newton	294	26	0.088	
Avalon Chestnut Hill	Newton	204	9	0.044	
Arborpoint Woodland	Newton	180	7	0.036	
Cloverleaf	Natick	183	24	0.131	
The Gables	Westwood	350	26	0.074	
Hastings Village	Wellesley	52	2	0.038	
<b>Average Totals</b>		2,917	306	<b>0.105</b>	
<b>1165R Mass. Ave.</b>		<b>130</b>			<b>14</b>



## Section 3.2.13 Impact Analysis of the Natural and Built Environment

Below is a list of several points from Section 3.2.13 of the Town of Arlington's Ch. 40B Application that the proponent must address. Several other items have also been added as they are important to mention for background and context.

The items begin with Construction Phase Impacts and end with an Assessment of the Completed Development on the Environment.

**Construction Phase Impacts**

An eighteen-month, preliminary Construction Management Plan (Figure 1) has been developed by Aberthaw Construction, the Construction Manager currently performing Pre-Construction Services, and Bohler, the Site Civil Engineer. The plan indicates a phased approach; that is, four primary phases and sub-phases, as described in greater detail below:

PHASE NO.	WORK DESCRIPTION	LOCATION*	START**	FINISH**
1	Demolition	Building 2	mid-June 2021	end-July 2021
	Site Grading	North side of site, near Mirak Chevrolet parking lot.	mid-June 2021	end-July 2021
2	Demolition	Loading Dock, Building 1, Infill/Garage, and Drying Sheds.	mid-July 2021	mid-Sept 2021
2a	Bridge Replacement	Mill Brook	early-Aug 2021	early-April 2022
2b	Utility Installation	Ryder St and Mass Ave connector driveways.	early-Aug 2021	late-Sept 2021
3	Construction	Buildings 1, 3, and 4	late-Aug 2021	mid-Dec 2022
4	Construction	Building 2	late-Feb 2021	mid-Dec 2022
4a	Paving/Landscaping	Ryder St driveway connector, Mill Brook walkway, and areas adjacent to Buildings 1, 3, and 4.	early-June 2022	late-Oct 2022
4b	Paving/Landscaping	Driveway to Mass Ave and adjacent to Building 2.	early-Aug 2022	late-Oct 2022

\*Refer to Figure 1.

\*\*Dates and durations are preliminary and subject to change.

**Pre-Construction and Site Mobilization**

Prior to the start of any activity on site, building permits and affidavits pertaining to controlled construction must be in place. A Stormwater Pollution Prevention Plan (SWPPP) will be prepared as part of the construction stormwater registration process required by the EPA and will be provided to the Town if requested. A SWPPP is a document outlining best management practices for controlling stormwater runoff and preventing sediment from entering adjacent waterways during construction.

Sediment and erosion control measures, in the form of haybales, haysocks or silt fence, will be staked in place around the perimeter of the site and maintained for the duration of construction. Other measures



### Section 3.2.13 Impact Analysis of the Natural and Built Environment

such as vehicle wash-off areas, sediment trap/filters at catch basins, silt fences around stockpiled soils, and a spill management kit, will all be employed.

A series of Pre-Construction Meetings were held with MassHousing, the Town of Arlington, and adjoining neighborhood residents. The list of meetings is as follows:

	MEETING/PRESENTATION	DATE
1	MassHousing Introductory Meeting	February 13, 2020
2	Introductory Mtg (Town Mgr and Planning & Community Development)	March 26, 2020
3	Follow-Up Mtg (Town Mgr and Planning & Community Development)	April 2, 2020
4	Mr. Byrne Introductory Presentation	April 17, 2020
5	Mr. DeCoursey Introductory Presentation	April 28, 2020
6	Mr. Hurd Introductory Presentation	April 29, 2020
7	Ms. Mahon Introductory Presentation	May 14, 2020
8	Mr. Diggins Introductory Presentation	June 24, 2020
9	Abutters Presentation	June 24, 2020
10	Select Board Members	June 29, 2020
11	Conservation Commission Introductory Meeting	July 23, 2020
12	Conservation Commission RDA Hearing #1	August 20, 2020
13	ISD & Fire Dept. Introductory Meeting	August 31, 2020
14	ISD, Fire Dept., and DPW Site Meeting	September 17, 2020
15	Conservation Commission RDA Hearing #2	September 17, 2020
16	Conservation Commission RDA Hearing #3	October 1, 2020
17	Arlington Historical Commission Presentation	October 6, 2020

In addition to numerous meetings with Town Officials and abutters, the development team met on site with members of the Inspectional Services Department, Fire Department, and Department of Public Works to review Site Utilities, Traffic and Pedestrian Access, proposed Hydrant Locations, etc.. This meeting took place on September 17, 2020 and meeting notes were subsequently sent to the Town.

#### ***Adherence to Conservation Commission Order of Conditions***

In addition to the SWPPP, the project will adhere to the Arlington Conservation Commission's Order of Conditions. The project proponents have gone before the Conservation Commission several times and will return with a Notice of Intent after the ZBA process concludes. The resultant Order of Conditions will prescribe measures to be taken during the construction process to ensure that the Mill Brook and groundwater are protected. Additionally the Construction Manager will erect a chain-link fence to secure the site perimeter and may place a construction trailer(s) on site.

#### ***Adherence to Street Occupancy & Trench Permitting Regulations***

The Construction Manager has reviewed the Town's Street Occupancy & Trench Regulations and will make certain that the subcontractors familiarize themselves with the document and adhere to its requirements.



### Section 3.2.13 Impact Analysis of the Natural and Built Environment

#### ***NFPA 241 Plan***

Prior to any demolition, as further described below, a National Fire Prevention Association (NFPA 241) plan will be submitted to and approved by Arlington Fire Prevention and implemented. This plan includes a description of impairments to the existing life-safety and notifications' systems, such as sprinklers and smoke detectors. Typically new standpipes are installed with fire hose connections in existing buildings and addressable smoke detectors are replaced with heat detectors so as to mitigate false-alarms being triggered (and called into the Fire Department) due to dust generated during demolition.

#### ***Abutter Notification***

Prior to mobilizing on site, the direct abutters will all be notified and a communication plan will be devised for notices and updates during construction. Arlington Fire Prevention will be included in this notification plan.

#### ***Works Hours***

The Town of Arlington has implemented a policy whereby construction activity (including demolition) needs to take place between the hours of 8am and 6pm on weekdays. This policy will be adhered to by the contractors in conformance with the Town's Noise Ordinance.

#### ***Site Access***

Site access by construction vehicles will be by Mass Ave, Ryder Street, and the Quinn Access Road for the duration of construction.

#### ***Phase 1: Demolition and Site Grading***

During this phase, Building 2, located just south of the Mill Brook and across from Workbar, will undergo hazardous materials abatement. An abatement work plan will be implemented and the work will be carried out under the supervision of a third-party hygienist, hired by the developer. All necessary reporting will be done by the hygienist and filed with the appropriate authorities having jurisdiction.

Prior to demolition of Building 2, utilities will be cut and capped and the overhead electrical wires that remain live and serving neighboring buildings (within ten feet of Building 2) will be wrapped with high-visibility rubber by Eversource. The building will be demolished using a combination of track-mounted excavators and by hand where space between Building 2 and neighboring buildings is constricted.

The driveway, leading across the bridge to the north side of the site, may be closed intermittently while work progresses. The timing and duration of this and any other on-site road closures will be evaluated by the Construction Manager in concert with the demolition sub-contractor when the subcontract is awarded. Neighbors and direct abutters will be notified, as will Arlington Fire Prevention. As part of the demolition, the overhead connecting corridor to Workbar will also be removed and the exterior wall of that building will be restored. The garage and loading dock spanning the Mill Brook will be removed, as will the entirety of the building's foundations.



### Section 3.2.13 Impact Analysis of the Natural and Built Environment

During demolition, the contractor will be responsible for implementing fire watch and police details as required by the Town and will use hoses to wet-down any debris piles to control dust. Fire hydrant(s) will likely be used to provide the water and will be metered accordingly.

Site Grading on the north side of the property will take place during Phase 1. A drainage swale will be created to intercept and divert water runoff from properties to the north and northwest into new drainage pipes which will flow through a series of catch basins and drain manholes before being treated by a water quality unit for removal of sediment, floatable debris, and hydrocarbons. The runoff will discharge into Mill Brook as it does currently. This approach has been discussed with the Department of Public Works.

#### Phase 2 Demolition

During this phase, additional demolition will take place in and around Building 1. The Infill/Garage structure will be removed along with the adjacent, single-story Drying Sheds. The same sediment and dust-control measures, noted above, will be implemented. The foundations of the loading dock, Infill/Garage, and Drying Sheds will be completely removed. The smokestack adjoining the Drying Sheds and Building 3 will also be removed along with its foundation.

Selective demolition will take place inside of Building 1, including sandblasting of the interior masonry, timber deck, and beams.

#### Phase 2a Bridge Replacement

The bridge spanning the Mill Brook Conduit and connecting the south and north sides of the site will be replaced and the roadway between Workbar and the future Building 2 will be widened. The wider roadway will accommodate two-way traffic and provide much needed and improved access for emergency vehicles to the north side of the site. The roadway and bridge are being designed by Bohler Engineering and Nitsch Engineering, respectively, to handle normal vehicular and truck loading as well as the largest emergency apparatus (a 95-foot ladder truck) that the Town Fire Department uses. Information pertaining to the fire apparatus (size, weight, height, and turning radius) has been provided by Arlington Fire Prevention and given to the engineers for the design of the road and bridge.

Nitsch Engineering, the bridge engineer, has developed a design for the new bridge crossing over the Mill Brook to replace the existing bridge. After investigating the existing conditions and various options to construction the new bridge, the design for the places the supports on top of the existing conduit walls. This is how the current bridge is supported. Supporting the new bridge on top of the existing conduit walls is advantageous because it avoids underground utilities, including the MWRA's sewer line, that traverses the site from east to west. The hydrology of the Mill Brook will not be impacted by this new design. The final design of the bridge will be reviewed by the Mass Department of Transportation.

#### Phase 2b Utility Installation

During this phase, new water, sewer, drainage, telecommunications, electric, and natural gas, infrastructure will be installed. The final pathways and means of serving the various buildings on the site and maintaining electrical and telecommunications service to neighboring properties are currently being



### Section 3.2.13 Impact Analysis of the Natural and Built Environment

evaluated. Facilities exist in both Mass Ave and Ryder Street to adequately serve the site and neighboring properties. Service pathways include coming off of Mass Ave down the driveway, north to the site and off of Ryder Street east into the site. Neighbors will be notified well in advance of any service outages while utilities are being installed. The contractor will work with the utility providers to endeavor to limit service outages, as much as possible, to off-hours times (nights and weekends).

#### Phase 3 Construction, Buildings 1, 3, and 4

Building 1, the existing four-story, brick and timber-beam building will be renovated into residential dwellings. Building 3 will be renovated into an amenity building or “great room” for use by residents of the complex. Building 4 will be a new building with residential dwellings, consisting of four-story wood-frame construction over a two-level concrete and steel garage podium.

All new life-safety systems, finishes, electrical/lighting, telecommunications, security, and HVAC systems, will be installed in these buildings.

Contractors will adhere to the Town’s work-hour policy, described above. Any deviation from this policy, including weekend work, will be applied for through the authorities having jurisdiction within the Town, if it is determined necessary to maintain the construction schedule. Measures described above from Pre-Construction/Mobilization through Site Access, will be maintained throughout this phase.

#### Phase 4 Construction, Building 2

Similar to that described above for Building 4, Building 2 shall be designed for residential dwellings as a panelized wood building, four-stories of wood-frame construction over a single-level concrete and steel garage podium. Measures described above from Pre-Construction/Mobilization through Site Access, will be maintained throughout this phase.

#### Phases 4a and 4b Paving and Landscaping

These are the final phases of construction comprising new paving of roadways, sidewalks, and landscaping within the site. Paving consists of a combination of bituminous concrete (asphalt), poured-in-place concrete, and masonry pavers. Setting of curbs, and planting trees, grass, and shrubs will also take place during this phase.

This phase also includes installing new railings (which may require some modifications to the top of the existing Mill Brook conduit wall) along the Mill Brook Walkway and on the bridge, and includes dismantling of the sediment and erosion control measures described above.

By this time, temporary (and possibly permanent) Certificates of Occupancy will have been applied for and possibly granted for all of the buildings/dwelling units within the complex, following successful inspections by the authorities having jurisdiction. The affordable housing lottery will be underway and preparations for resident move-ins will have been made.



### Section 3.2.13 Impact Analysis of the Natural and Built Environment

#### ***Evaluation of Pre-Development Conditions***

Please refer to 3.2.6 Report on Existing Site Conditions for information.

#### ***Post-Development Impacts:***

- ***Surface and Groundwater Quantity and Quality***

Post-Development, the surface run-off quantity and quality will be greatly improved over what it is today. The current site is 93.6% impervious. Post-Construction, this condition will be reduced by 22.1%, meaning that 22.5% (or close to 20,000 square feet) of the site will be planted, pervious space. This will dramatically increase the amount of natural water infiltration, significantly reducing runoff into the Mill Brook. Additionally, through the implementation of sediment screening measures and manhole structures that will allow ease of access to clean the drain lines, the quality of runoff into the Mill Brook will be significantly improved.

- ***Groundwater Recharge***

Due to the significant reduction of the impervious surface area of the site and improved drainage measures described above, our engineers have determined that a groundwater recharge system is not necessary and, therefore, will not be implemented.

- ***Open Space and Recreational Areas and Space***

Please refer to 3.2.6 Report on Existing Site Conditions for a description of the open space and recreational areas near the development site. In addition, the development will feature new public/pedestrian access to the Mill Brook corridor that does not exist today. This is consistent with the goals of the Arlington Master Plan as it relates specifically to this site and to other underutilized, industrial sites along the Corridor.

- ***Wildlife Habitats/Corridors, Wetlands and Bodies of Water (including streams and rivers, both localized and general).***

There are no wildlife corridors or habitats present on the site and wetland areas are confined to the Mill Brook Conduit. As described above, improved natural water infiltration will reduce the amount of runoff into the Mill Brook and, by extension, the Lower Mystic Lake. Other bodies of water, such as Spy Pond in East Arlington are not affected by the Mill Brook. Additionally, existing invasive and non-native plant species will be replaced with native species within the development.

- ***Species of Concern in Massachusetts***

There are no animal species of concern in Massachusetts apparent on this site; however the proponents and designers recognize the need to incorporate native species of plant life into the landscape design of the site. The project will incorporate only plants from the Town's approved list.

- ***Historic and Cultural Resources***

Please refer to Section 3.2.6 Report on Existing Site Conditions for a description of the history and current uses of the site. None of the buildings on the site are on the National Register of Historic Buildings, however the proponents of the development went before The Arlington Historical Commission on October 6, 2020 to introduce the project and discuss the proposed modifications to the site and buildings thereon. Additionally, the proponents have filed a Project Notification Form with the Massachusetts Historical Commission and have received confirmation from the MHC that the "...project is unlikely to affect significant historic or archeological resources." The proponents are committed to highlighting the historic and cultural resources of the complex by preserving the most significant buildings on the site and providing professional photographic documentation of the



### Section 3.2.13 Impact Analysis of the Natural and Built Environment

structures to be removed, and meaningful, accessible, and durable interpretive signage inside and outside of the remaining buildings and along the new Mill Brook walkway.

- ***Mitigation of Identified Post-Development impacts***

The development proponents will be pleased to respond to any identified Post-Development Impacts once comments from the Town of Arlington ZBA are received.

- ***Mitigation Measures Requiring Continuing/Periodic Maintenance & Proposed Maintenance Plan.***

The Mirak Family intends to own and maintain the development in perpetuity. Therefore, materials and systems have been selected with longevity in mind. A property maintenance plan is being devised and will be similar to that successfully utilized at other developments undertaken by the Mirak family. One of the main goals of the development team is to see that this site becomes a responsible and sustainable resource in the Town for generations to come.

#### ***Assessment of Completed Development on the Environment***

There are a number of very positive effects that the proposed development will have on the environment – that is the immediate site, the larger community, and broader environment (as applicable), as follows:

- ***Elements of Smart Growth & Transit-Oriented Development (TOD)***

This is perhaps the most exciting aspect of the project – that is, promoting a pedestrian-friendly living environment and reducing the dependence on private automobiles. Although the project is not strictly looked at as a TOD by the Town, many of the design elements of a TOD have been incorporated.

According to the State of Massachusetts' definition, a TOD is "...an approach to development that focuses land uses around a transit station or within a transit corridor". The site is located less than a quarter of a mile from Massachusetts Avenue, a major public transit (bus and bicycle) route that links Arlington Center, Alewife Station, and Harvard Square; Alewife and Harvard Sq. being Massachusetts Bay Transportation Authority Red Line stations that further connect to points east, Downtown Boston, and the commuter rail network.

The Minuteman Commuter Bikeway is also located within a quarter mile of the site. The Bikeway is a 10-mile route that connects Belmont to Alewife Station by passing through Lexington and Arlington and provides an alternative to vehicular and mass-transit commuting.

With Workbar essentially being part of the development site, residents will have the option to explore an alternative to the more traditional, remote workplace. Memberships are available that allow people to reserve a variety of workstations, desks, and conference rooms where almost all types of business can be carried out.

In addition, the project proponents will implement a park-share program whereby forty covered parking spaces during weekdays and ten spaces on weekends and at night on the site will be shared between Workbar and the apartment residents. From 8am to 5pm, parking spaces used by residents who commute to work by car will be shared with Workbar members. The advantage to doing this is



### Section 3.2.13 Impact Analysis of the Natural and Built Environment

that it eliminates the need for a separate dedicated parking lot for Workbar, thus reducing paved areas and mitigating heat-island effects.

Another important aspect of TODs is their proximity to shopping, entertainment, and employment. This site is uniquely situated such that all of these amenities are well within walking or biking distance as is access to local government offices, schools, and places of worship.

- ***Hazardous Materials Abatement***

At the close of the demolition phase, all hazardous materials, identified on the site, will have been completely removed and disposed of in accordance with Massachusetts Law. Materials that need to be abated include asbestos-containing flooring, glazing compounds, asphaltic coatings on brick walls and ceilings, sealants, tar paper behind aluminum siding, paper beneath flooring, caulking, insulation materials, mastics, asphaltic roofing materials, and perimeter flashing/sealants. Removing these hazardous materials under the Law and under the supervision of a licensed, third-party hygienist mitigates exposure to future occupants and the possibility that proper abatement procedures may not be fully understood and overlooked.

- ***Reuse of Existing Buildings***

The adaptive reuse of two existing buildings - Building 1, a 4-story brick and timber-beam building and Building 3, a 1-story masonry building - will offset thousands of kilowatt hours of electricity and diesel fuel from being expended, should they be built from the ground-up.

- ***Stormwater Management***

There is currently no stormwater management or treatment of storm runoff for water quality at the existing site. The proposed project has been designed so that proposed impervious areas including the building roof and paved parking and driveway areas will be collected and passed through the proposed drainage system for treatment prior to discharge. The proposed system will discharge to Mill Brook as it does under existing conditions.

Total impervious area will be less than existing as a result of construction of the proposed project. This will result in a decrease in post-development peak rates of runoff from pre-development conditions for the 2-, 10-, 25- and 100-year storm events. The proposed decrease in impervious area will result in an increase in groundwater recharge.

Runoff from the site and roofs will be collected in the proposed storm sewer system. Water quality treatment will be provided via deep sump catch basins, and a proprietary water quality unit.

Although the site is a redevelopment, all applicable stormwater standards will be met to the maximum extent practicable.

- ***Renewable Energy***

The Mirak Family has been a great proponent of using renewable energy sources to power, heat, and cool their buildings. Solar arrays have been installed on the roofs of Workbar and on the existing buildings within the Mill complex. A geothermal system provides the heating and cooling energy for the Workbar building. The geothermal system on Workbar will be kept active but separated from the remainder of the development. The existing solar array on the roof of Workbar and Building 1 will be modified during the redevelopment process. The extent of the modifications will be determined by the proponents.



### Section 3.2.13 Impact Analysis of the Natural and Built Environment

- ***Traffic Impacts***

A Traffic Impact Report (TIR) was prepared by Nitsch Engineering that considered seven (7) intersections and twelve (12) adjacent roadway segments. Automatic Traffic Recorder (ATR) data was collected for a 48-hour period from February 4 to February 5, 2020, during the peak weekday hours of the morning (7am-9am) and afternoon (4pm-6pm). Turning Movement Count (TMC) data was recorded at the seven study intersections, also during the peak weekday hours of the morning and afternoon. It is important to note that the data collection was done in February 2020, pre-COVID-19, when traffic was still heavy. A signalization analysis was also done among other types of analyses such as Level of Service and Traffic Operations.

The TIR shows no appreciable difference, post-development, in trips generated to/from the site and no new signals are warranted. The TIR also indicates that the number of proposed on-site parking spaces will meet the demands of the project.

Additionally, a bicycle room will be available to all residents and the proponents encourage bicycle use in and around the property and as an alternative method of commuting to work. Provisions have been put in place as part of the site design to allow for a safe separation of cars and bicycles.

The complete TIR is included in Section 3.2.14.

- ***Reintroduction of Native Plant Species***

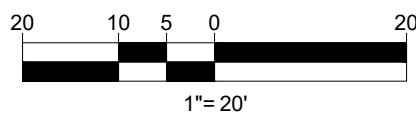
Re-introducing native plant species has many benefits for the site and larger community. Native plant species attract and support native birds, pollinators, and other wildlife. In addition to food, native plant species provide many more of the shelter resources wildlife requires than non-natives. Planting natives, in turn, supports greater biodiversity and abundance of native wildlife. Typically native plants require less maintenance and less water than non-natives.

END of SECTION





379 of 50







RYDER STREET  
(40' WIDE - PRIVATE)  
TRAFFIC  
(ASPHALT ROADWAY)

FOREST STREET  
(40' WIDE - PUBLIC)  
TRAFFIC  
(ASPHALT ROADWAY)

MASSACHUSETTS AVENUE  
(1893 LAYOUT)  
TWO WAY  
TRAFFIC  
(ASPHALT ROADWAY)

PHASE 4  
DRIVEWAY PAVING  
& LANDSCAPING  
06/06/22-10/20/22

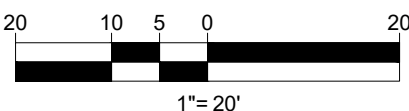
PHASE 4  
PAVING, WALKS, &  
LANDSCAPING  
08/08/22-10/20/22

PHASE 3  
BUILDING 1, 3 & 4  
CONSTRUCTION  
08/23/21-12/15/22

PHASE 4  
BUILDING 2  
CONSTRUCTION  
02/21/22-12/15/22

Should this be  
2/21/21? If so  
would this be  
Phase 3?

THIS PLAN IS FOR REFERENCE ONLY  
AND IS NOT TO BE USED FOR  
CONSTRUCTION



**BOHLER**

SITE CIVIL AND CONSULTING ENGINEERING  
PROGRAM MANAGEMENT  
LANDSCAPE ARCHITECTURE  
SUSTAINABLE DESIGN  
PERMITTING SERVICES  
TRANSPORTATION SERVICES

REVISIONS

REV	DATE	COMMENT	CHECKED BY	DRAWN BY
1	3/10/20	REVISED BUILDING 2 & GRADING	BPB	JMJ
2	06/15/20	SITE PLAN & GRADING	AWP	JMJ
3	07/15/20	CONSERVATION COMMISSION	AWP	JMJ
4	08/21/20	CONSTRUCTION PHASING	AWP	JMJ



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PRELIMINARY

THIS DRAWING IS INTENDED FOR MUNICIPAL AND/OR AGENCY REVIEW AND APPROVAL. IT IS NOT INTENDED AS A CONSTRUCTION DOCUMENT UNLESS INDICATED OTHERWISE.

PROJECT No.: W191330  
DRAWN BY: AWP  
CHECKED BY: MJM  
DATE: 02/17/2020  
CAD ID: W191330-CVL-4

PROJECT:

PROPOSED SITE  
PLAN DOCUMENTS

FOR

1165R MASS MA  
PROPERTY LLC

PROPOSED  
RESIDENTIAL DEVELOPMENT  
1165R MASSACHUSETTS AVE.  
MIDDLESEX COUNTY  
TOWN OF ARLINGTON, MA  
MAP #57, BLOCK #2, LOT #10B  
AND PART OF LOT #15

**BOHLER**

352 TURNPIKE ROAD  
SOUTHBOROUGH, MA 01772  
Phone: (508) 480-9900  
Fax: (508) 480-9080  
www.BohlerEngineering.com

**J.M. JOHNSON**

PROFESSIONAL ENGINEER  
MASSACHUSETTS LICENSE No. 45959

SHEET TITLE:

PHASES 3 & 4

SHEET NUMBER:

PH 3-4

REVISION 4 - 08/21/20



1165R Massachusetts Avenue  
Ch. 40B ZBA Submission

### Section 3.2.12 Pro Forma

Please see the enclosed Pro Forma, prepared by 1165R Mass MA Property, LLC. and submitted to MassHousing on September 15, 2020.



## Application for Chapter 40B Project Eligibility / Site Approval

### for MassHousing-Financed and New England Fund ("NEF") Rental Projects

#### Section 5: FINANCIAL INFORMATION

In order to issue Site Approval, MassHousing must find (as required by 760 CMR 56.04 (4)) that an initial pro forma has been reviewed and that the Proposed Project appears financially feasible and consistent with the Chapter 40B Guidelines, and that the Proposed Project is fundable under the applicable program.

#### Initial Capital Budget

##### Sources

Description	Source	Budgeted
Private Equity	Owner's Cash Equity	\$13,936,500
Private Equity	Tax Credit Equity	\$0
Private Equity	Developer Fee Contributed or Loaned	\$0
Private Equity	Developer Overhead Contributed or Loaned	\$300,000
Other Private Equity	Land Contributed or Loaned	\$3,000,000
Public/Soft Debt		\$0
Subordinate Debt		\$0
Permanent Debt	Rockland Trust Bank	\$33,396,500
Permanent Debt		\$0
Construction Debt	<i>for informational purposes only, not included in Sources T</i>	\$0
Additional Source		\$0
Additional Source		\$0
Total Sources		\$50,633,000

#### Pre-Permit Land Value

Item	Budgeted
As-Is Market Value*:	3,980,000.00
Reasonable Carrying Costs:	\$0
Total Pre-Permit Land Value:	3,980,000.00

\* As-Is market value to be determined by a MassHousing commissioned appraisal



**Uses (Costs)**

Item	Budgeted
<b>Acquisition Cost (Actual):</b>	
Actual Acquisition Cost: Land	\$3,000,000
Actual Acquisition Cost: Buildings	\$0
Reasonable Carrying Costs	\$0
<b>Subtotal - Acquisition Costs</b>	<b>\$3,000,000</b>
<b>Construction Costs-Building Structural Costs (Hard Costs):</b>	
Building Structure Costs	\$30,114,500
Hard Cost Contingency	\$1,430,000
<b>Subtotal - Building Structural Costs (Hard Costs)</b>	<b>\$31,544,500</b>
<b>Construction Costs-Site Work (Hard Costs):</b>	
Earth Work	\$882,500
Utilities: On-Site	\$321,500
Utilities: Off-Site	\$0
Roads and Walks	\$513,500
Site Improvement	\$62,000
Lawns and Plantings	\$107,500
Geotechnical Condition	\$0
Environmental Remediation	\$203,000
Demolition	\$591,000
Unusual Site Conditions/Other Site Work	\$1,212,000
<b>Subtotal - Site Work (Hard Costs)</b>	<b>\$3,893,000</b>
<b>Construction Costs-General Conditions, Builders Overhead and Profit (Hard Costs):</b>	
General Conditions	\$1,883,500
Builder's Overhead	\$554,500
Builder's Profit	\$580,000
<b>Subtotal - General Conditions, Builder's Overhead &amp; Profit</b>	<b>\$3,018,000</b>
<b>General Development Costs (Soft Costs):</b>	
Appraisal and Marketing Study <i>(not 40B "As Is" Appraisal)</i>	\$30,000
Marketing and Initial Rent Up <i>(include model units if any)</i>	\$159,000
Real Estate Taxes <i>(during construction)</i>	\$81,000
Utility Usage <i>(during construction)</i>	\$0
Insurance <i>(during construction)</i>	\$289,000
Security <i>(during construction)</i>	\$0
Inspecting Engineer <i>(during construction)</i>	\$45,000
Construction Loan Interest	\$1,817,500
Fees to Construction Lender:	\$537,500
Fees to Permanent Lender:	\$0
Fees to Other Lenders:	\$25,000



General Development Costs (Soft Costs) - continued

Item	Budgeted
Architecture / Engineering	\$1,450,000
Survey, Permits, etc.	\$120,500
Clerk of the Works	\$0
Construction Manager	\$0
Bond Premiums	\$0
Environmental Engineer	\$168,000
Legal	\$623,000
Title <i>(including title insurance)</i> and Recording	\$53,000
Accounting and Cost Certification <i>(incl. 40B)</i>	\$20,000
Relocation	\$0
40B Site Approval Processing Fee	\$2,500
40B Techical Assistance / Mediation Fee	\$9,000
40B Land Appraisal Cost <i>(as-is value)</i>	\$6,000
40B Final Approval Processing Fee	\$29,700
40B Subsidizing Agency Cost Certification Examination Fee	\$0
40B Monitoring Agent Fee	\$0
MIP	\$0
Credit Enhancement	\$0
Letter of Credit Fees	\$2,500
Tax Credit Allocation Fee	\$0
Other Financing Fees	\$0
Development Consultant	\$35,500
Other Consultant: FF&E	\$508,300
Other Consultant: Affordable Lottery Expense	\$90,000
Syndication Costs	\$0
Soft Cost Contingency	\$318,000
Other Development Costs:	\$257,500
<b>Subtotal - General Development Costs (Soft Costs)</b>	<b>\$6,677,500</b>
Developer Fee and Overhead:	
Develper Fee	\$1,733,500
Developer Overhead	\$300,000
<b>Subtotal Developer Fee and Overhead</b>	<b>\$2,033,500</b>
Capitalized Reserves:	
Development Reserves	\$176,500
Initial Rent Up Reserves	\$290,000
Operating Reserves	\$0
Net Worth Account	\$0
Other Capitalized Reserves	\$0



Subtotal - Capitalized Reserves

\$466,500

Summary of Subtotals

Item	Budgeted
Acquisition Costs (Actual):	\$3,000,000
Building Structural Costs (Hard Costs)	\$31,544,500
Site Work (Hard Costs)	\$3,893,000
General Conditions, Builder's Overhead & Profit (Hard Costs)	\$3,018,000
Developer Fee and Overhead	\$2,033,500
General Development Costs (Soft Costs)	\$6,677,500
Capitalized Reserves	\$466,500
Total Development Costs (TDC)	\$50,633,000

Summary

Total Sources	\$50,633,000
Total Uses (TDC)	\$50,633,000

Projected Developer Fee and Overhead*:	\$2,033,500
Maximum Allowable Developer Fee and Overhead:**:	\$3,494,375
Projected Developer Fee and Overhead Equals	58.00% of Maximum Allowable Fee and Overhead

*\* Note in particular the provisions of Section IV.B.5.a of the Guidelines, which detail the tasks (i) for which a developer may or may not receive compensation beyond the Maximum Allowable Developer Fee and Overhead and (ii) the costs of which must, if the tasks were performed by third parties, be included within the Maximum Allowable Developer Fee and Overhead.*

*\*\* Please consult the most recent DHCD Qualified Allocation Plan (QAP) to determine how to calculate the maximum allowable developer fee and overhead. If you have any questions regarding this calculation, please contact MassHousing.*

END of SECTION



1165R Massachusetts Avenue  
Ch. 40B ZBA Submission

### Section 3.2.11 List of Requested Waivers

Please see the enclosed List of Requested Waivers for the 1165R Massachusetts Avenue Development.



**1165R MASSACHUSETTS AVENUE**  
**List of Requested Waivers**

Pursuant to 760 CMR 56.05(2)(h), 1165R Mass MA Property, LLC (hereinafter referred to as the “Applicant”), submits the following list of waivers, so-called, to “local requirements and regulations,” including without limitation the Town of Arlington Zoning Bylaw, as amended, the Arlington Wetlands Protection Bylaw (Title V, Article 8 – “Wetlands Bylaw”), Article 16 – Tree Protection and Preservation Bylaw, Arlington Regulations for Wetlands Protection (“Wetlands Regulations”) and other local regulations and requirements as defined in M.G.L. c.40B, §56.02, including all local rules, ordinances, codes and regulations that are more restrictive than state requirements.

**LIST OF WAIVERS**

<b><i>By-law Regulation</i></b>	<b><i>Requirement</i></b>	<b><i>Proposed</i></b>	<b><i>Waiver</i></b>
Wetlands Regulations Section 4	Town definition of “Stream” is inconsistent with the Massachusetts Protection Act and 310 CMR 10.04.	Apply the Massachusetts Wetlands Protection Act definition of “Stream”.	Waiver requested – See Footnote “1”.
Wetlands Regulations, §20C	Restriction on work on banks of Ryder Brook.	Work proposed on Ryder Brook.	Waiver requested – See Footnote “2”.
Wetlands Regulations, §22	Performance regulations for land under water bodies and restrictions on work on land under water bodies and within 25’ of such land.	Work proposed within Ryder Brook.	Waiver requested – See Footnote “2”.
Wetlands Regulations, §24	Restrictions on vegetation removal.	Some vegetation will be removed along the bank of Ryder Brook.	Waiver requested – See Footnote “2”. The applicant proposes replacing vegetation as shown on the landscape plans.
Wetlands Regulations, §25	25’ no disturbance area – Adjacent Upland Resource Area.	Work is proposed within 25’ of both Ryder and Mill Brooks.	Waiver requested – See Footnote “3”.
Wetlands Regulations, §25	Alternative analysis required for work in 100’ Adjacent Upland Resource Area.	There are no alternatives.	Waiver requested – See Footnote “3”.



Wetlands Regulations, §25	No new buildings within the first 50' of the Adjacent Upland Resource Area unless approved in evaluating the existing total impervious surface on site.	New buildings are proposed within the first 50' of the Adjacent Upland Resource Area.	Waiver requested – See Footnote “3”.
Wetlands Bylaw Title V, Article 8, Section 4(b)	Conservation Commission could require a strip of undisturbed vegetative cover within the 200 foot riverfront area or “bordering” land – defined as 100 feet.	This is a previously disturbed area which is nearly entirely covered by impervious materials.	Waiver requested.
Wetlands Bylaw Title V, Article 8, §16 and Wetlands Regulations, §11	Permitting and consultant fees – Fees in Wetlands Bylaw and Regulations are not consistent.	Permitting and Consulting Fee.	Waiver requested of 50% of these fees.
Wetlands Bylaw Title V, Article 8, §§10 and 11	Bond requirements.	Applicant does not propose to post any security.	Waiver – This request is an added capital requirement that effects the economic viability of the project.
Title V, Article 16, Sections 2 and 4 – Tree Protection and Preservation	These sections prohibit removal of “Protected Trees” unless removal is authorized through the approval of a Tree Plan. Construction and demolition require the approval of a Tree Plan prior to or concurrent with application for a building permit. Protected Trees require a payment to a Tree Fund.	The Applicant seeks to remove thirteen trees all of which are non-native species that need to be removed to construct the project. Further, the trees growing out of the conduit walls of the Mill Brook need to be removed to prevent further damage to the conduit walls. The Applicant seeks a waiver of the payment to the Tree Fund.	Waiver requested. Absent the removal of the trees, the project cannot be constructed. The payment to the tree fund effects the financial viability of the project.
Zoning By-law (“By-law”) Article 5, Section 5.6.3	Multifamily/Apartment use is not allowed as of right or by special permit.	Multifamily use.	Waiver requested. The property is located in the industrial zone – absent a waiver, it cannot be constructed.
By-law Article 5, Section 5.6.2. Floor area ratio, front yard depth, right side yard and rear yard depth	The By-law provides for an FAR of 1.5, a front yard, a right side yard and rear yard depth of 10' each.	The Applicant proposes an FAR of 2.37 and the following: (a) front yard depth of 330'; (b) right side yard depth of 1.75'; and (c) rear yard depth of 9'. See plans.	Waiver requested – See Footnote “4”.



By-law Article 5, Section 5.3.15	Varying formulas for buildings with uneven height or façade.	See plans.	Waiver requested – See Footnote “4”.
By-law Article 5, Section 5.3.17	For buildings more than 3 stores in height, a 7.5 step back shall be provided at the fourth story or 30 feet above grade, whichever is less, along all building elevations with street frontage.	Building 4 does not comply.	Waiver requested – See Footnote “4”. Additionally, this requirement may not apply. Building 4 has no street frontage.
By-law Article 5, Section 5.6.2	Height Stories and Height Feet.	The Applicant proposes a 6 story building for Building 4, which consists of two floors of enclosed parking. the height proposed is 68’.	Waiver requested – See Footnote “4”.
By-law Article 6, Section 6.1.12 and the Bicycle Parking Design Guidelines	1.5 spaces per unit for a total of 195.	The Applicant proposes 44 spaces designed in accordance with the Bicycle Parking Design Guidelines or a waiver to construct 114 long-term spaces, which would include upper level/stacked-type parking. This will result in 114 total long-term spaces.	Waiver requested – See Footnote “5”.
By-law Article 6, Section 6.1.4	171 parking spaces required.	Applicant proposes 139.	Waiver requested – See Footnote “5”.
By-law Article 6, Section 6.1.11	24’ required for two-way drive aisle – varies by angle degree for one way.	23.6’ drive aisles proposed for two-way traffic.	Waiver requested – See Footnote “5”.
By-law Article 5, Section 5.7	No construction permitted in regulatory flooding, 15’ setback from waterway can be waived.	Work is proposed within 15’ of the waterway, a bridge and utility crossing within the waterway. Building 2 will be within 15’ of the Mill Brook due to the fact that the existing bridge needs to be rebuilt.	Waiver requested – See Footnote “5”.
By-law Article 3, Section 3.4	Environmental Review process before ARB.	Pursuant to M.G.L. c.40B, §§20-23, ZBA is vested with jurisdiction to issue the comprehensive permit.	Waiver requested.
Arlington Design Standards	Design standards for buildings along Mill Brook, Minuteman Bikeway and Massachusetts Avenue.	See plans.	Waiver requested – See Footnote “6”.



Title IX, Article 3, Sections 4A and 4B – Enforcement and Fees	Town Fees and Charges – Department of Community Safety and Office of Building Inspector.	Fees and charges related to fire safety, building permits, plan reviews, occupancy permits, plumbing permits, gas fitting and electrical permits.	Waiver requested allowing for 50% reduction of fees.
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## **FOOTNOTES**

1. The Conservation Commission has voted three (3) RDAs on September 17 and October 1, 2020, respectively, concluding that: (a) the site qualifies as a “Historic Mill Complex”, pursuant to 310 CMR 10.00 and is exempt from the Wetlands Protection Act’s Riverfront Standards; (b) the extent of the Historic Mill Complex is as set out on a certain amended plan provided to the Commission; and (c) the drainage ditch known locally as “Ryder Brook” is not a “stream” as defined in 310 CMR 10.04 and, therefore, is not a jurisdictional resource area. The Applicant respectfully suggests that the purported stream at issue is what is referred to as Ryder Brook, essentially a draining ditch located in the middle of the site.

Absent the waiver, the project cannot be built as proposed.

The Applicant intends to create a drainage ditch around the perimeter of the site which is of greater length than Ryder Brook that will enable the sheet flow water from the site, which is now nearly all impervious, and the water from the surrounding properties to drain into an open ditch to a closed pipe underground. The water onsite, which is not presently treated, will be treated in a water quality unit for removal of sediment, floatable debris and hydrocarbons before discharging into Mill Brook. Presently, water from the Applicant’s site and the abutting properties flows into the Mill Brook untreated.

This waiver, in fact, represents an environmental improvement.

2. Section 20C provides that “no activity other than maintenance of an already existing structure or Resource Area Enhancement, shall be allowed which will result in the building within or upon, removing, filling, or altering a bank.”

Ryder Brook is located within the site and absent the waiver requested, the project cannot be constructed economically.

3. The Applicant would be unable to construct the proposed project if the Board did not grant a waiver from this requirement. The site would be unable to accommodate buildings 1 and 2 because they would be located in the first 50 feet of the Adjacent Upland Resource Area. Also, construction is required within 25 feet of both Ryder and Mill Brook. Given the lot size, there is no alternative to work in the Adjacent Upland Resource Area, as application of this regulation would prevent construction on the site. Thus, absent the waiver requested, the project cannot be constructed.

4. Absent waivers of these zoning requirements, the proposed project would be uneconomical, would not result in the limited profit provided for in the regulations and the Applicant would be unable to secure financing for the construction of the proposed project.

5. The Applicant seeks a waiver of the required number of parking spaces, the required long-term bicycle parking spaces and the long-term bicycle design guidelines since the required spaces would be uneconomical for the proposed project.

6. The Applicant seeks a waiver of the design standards for buildings along Mill Brook and the Minuteman Bikeway as detailed in the plans filed.



The Applicant asserts that significant effort has been made to integrate the Mill Brook and Bikeway into the overall project and that the project has been designed to encourage public interaction along Mill Brook. Further, the Applicant will be integrating certain of the historic buildings on the property into the proposed development. Parking is below the buildings, essentially eliminating surface parking, making a 2-acre site, which is presently impervious, substantially more pervious and landscaped. The landscaped area is increasing by 18,631 square feet or approximately by 72%.

The Applicant has utilized its best efforts to incorporate a substantial number of the Design Standards adapted by the Town in 2015 into the design of this proposed project. Its ability to implement certain design standards are limited by significant costs which would cause the project to be uneconomical.



### Section 3.2.10 Recreation and Open Space Amenities

The 1165R Massachusetts Avenue development enjoys several different open space options, that include the new Mill Brook Walk, two interior lawns, and the Minuteman Commuter Bikeway.

Improved public access for pedestrians and cyclists will be provided along the Mill Brook, within the site itself (Figure 1). The walkway will extend from the Ryder Street/Site Access Driveway intersection to the site's eastern boundary and will be completely handicap-accessible. The walk will feature lighting, benches, bicycle racks, and new trees and plants. A decorative railing will separate the walk from Mill Brook and will incorporate interpretive signage that describes the history of the Theodore Schwamb Mill with text and photographs (Figure 2).

There are two interior lawn spaces, one located adjacent to the resident drop-off, west of the main entry to Building 4 and the other is located at the east end of the property, adjacent to the Mill Brook and Building 3 (Amenities Building).

Each lawn will feature new trees and plants, benches and bike racks. These are spaces where the public can mingle with residents and may feature outdoor games in favorable weather.

The property also offers an interior courtyard feature that is exclusive to the residents. This area will be accessible from the main lobby and is enclosed by Building 4 and the Amenities Building. The courtyard will be a place for residents to gather individually or for property events and will feature loose tables and chairs and overhead catenary lights (Figures 1 and 2).

The Minuteman Commuter Bikeway is located less than a quarter of a mile from the site and is accessible from Ryder Street. The Bikeway is a 10-mile long paved recreation and bicycle commuting path that passes through Arlington and Lexington and connects Alewife Station in West Cambridge, MA to South Road in Bedford, MA.







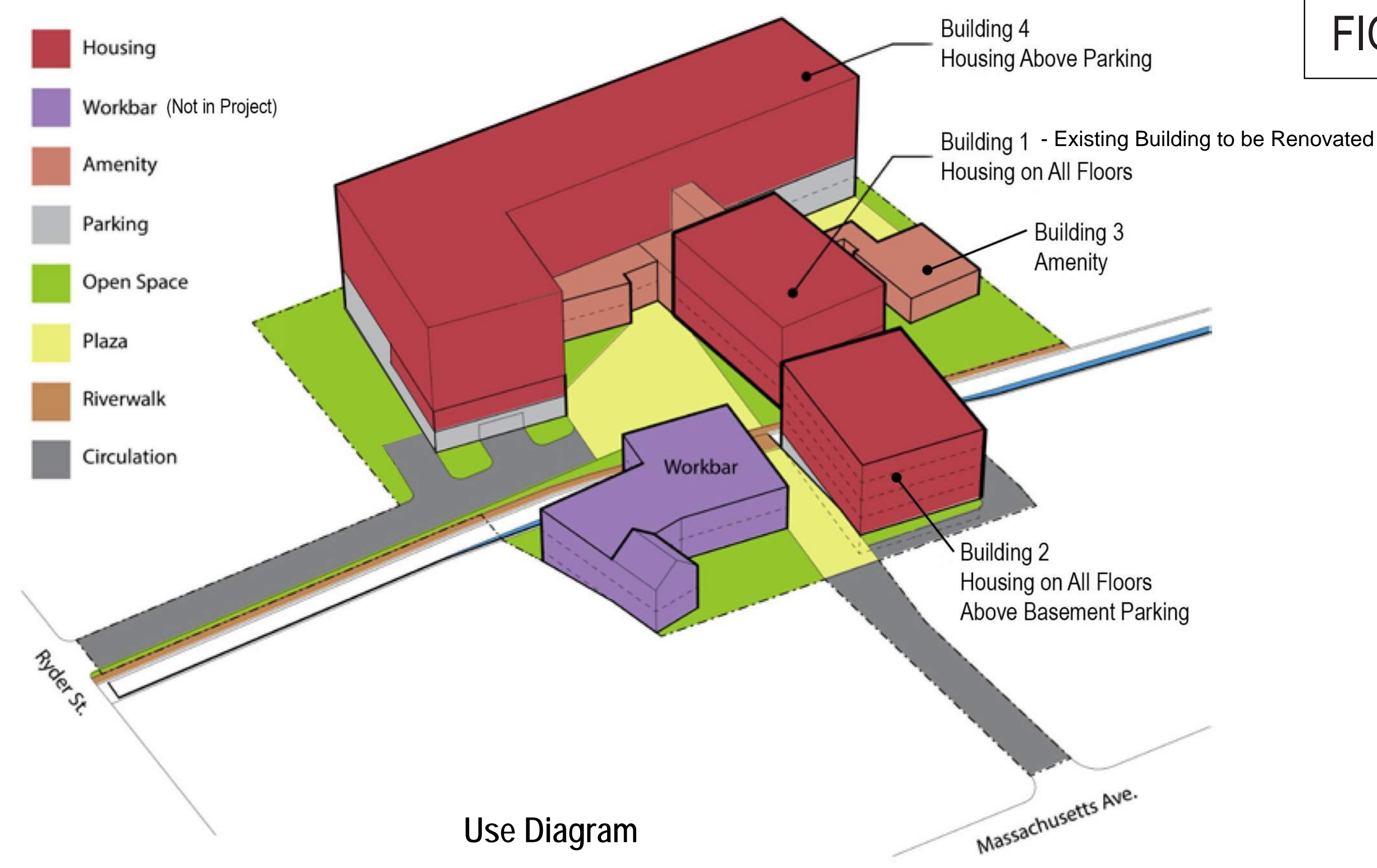


FIGURE 2



WIDENING THE BRIDGE: Existing & Proposed



View at "Entry" to 1165R



View of Building 4 and Building 1 with Common Entry



View along Mill Brook between Building 1 and 2



View along Mill Brook looking East



View of Eastern Courtyard Spaces



View of Building Exterior Amenity Space

**ARCHITECT**  
**bh+a**  
 Bargmann Hendrie + Archetype, Inc.  
 9 Channel Center Street  
 Boston, MA 02210  
 617 350-0450 Tel

**PROJECT NAME**  
**Redevelopment of 1165R Massachusetts Avenue**  
 1165R Massachusetts Avenue, Arlington, MA 02476

**CLIENT**  
**1165R Mass MA Property LLC**  
 c/o Spaulding & Slye Investments  
 One Post Office Square  
 26th Floor  
 Boston, MA 02109

**PROJECT TEAM**  
**Structural Engineer**  
 Velitas & Velitas  
 639 Granite St.  
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 (781) 843-2863  
**MEP/FP Engineer**  
 Wozny/Barbar & Associates, Inc.  
 Consulting Engineers  
 1076 Washington St.  
 Hanover, MA 02339  
 (781) 826-4144  
**Civil Engineer**  
 Bohler Engineering  
 332 Turnpike Road  
 Southborough, MA 01772  
 (508) 480-9900  
**Landscape Architect**  
 Kyle Zick Landscape Architecture  
 86 Bromfield Street, Suite 202  
 Boston, MA 02108

**REVISIONS**

1	
2	
3	
4	
5	

**DRAWING TITLE**  
**3D Views**

**DRAWING INFORMATION**

June 18, 2020  
 DATE OF ISSUE  
 MassHousing  
 DESCRIPTION  
 Michael Barker  
 SCALE  
 3/4" = 1'-0" (3/4" = 1'-0")  
 PROJECT #  
 FILE NAME

**DRAWING NUMBER**  
**A001**



### Section 3.2.9 Utility Plan

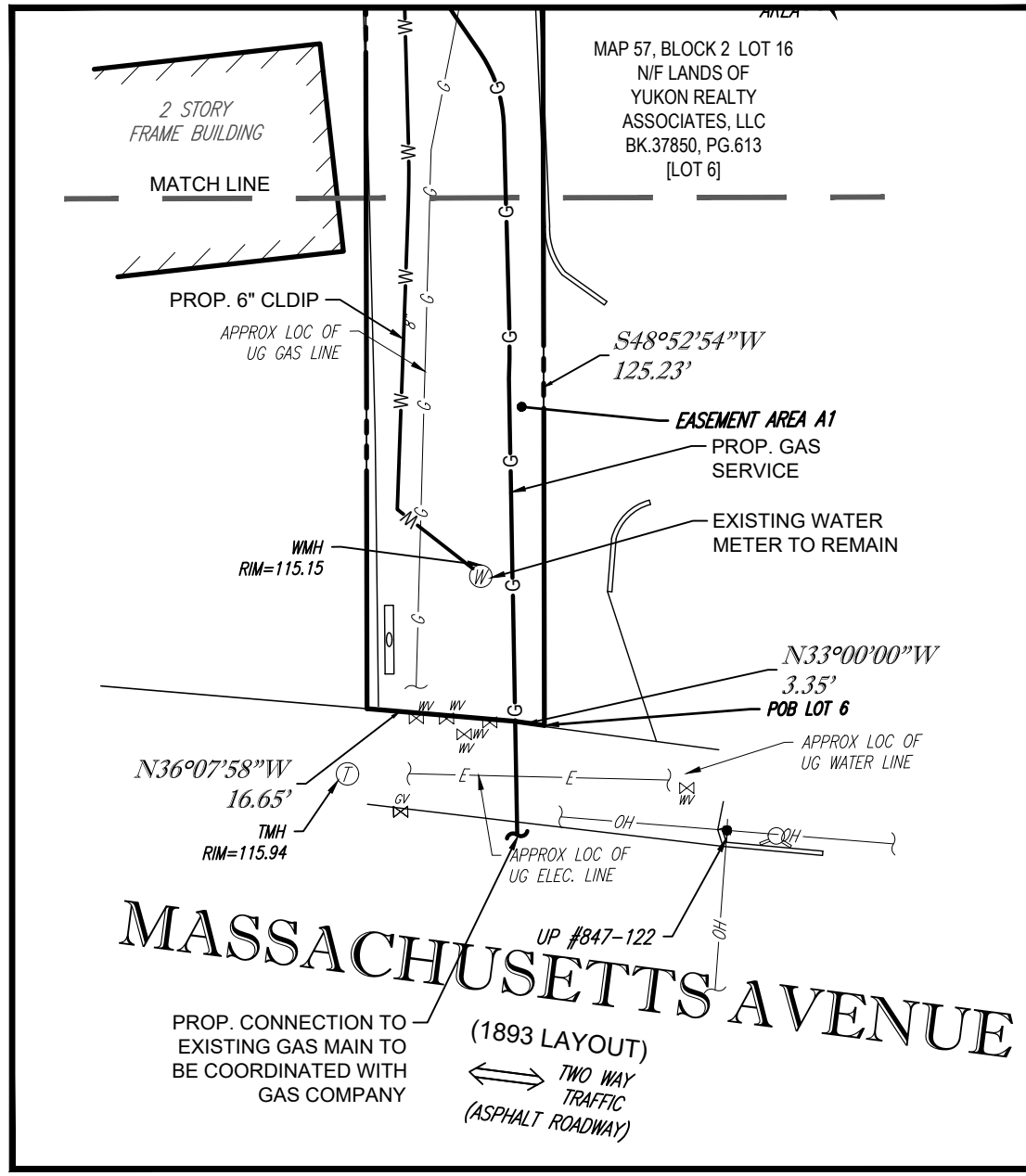
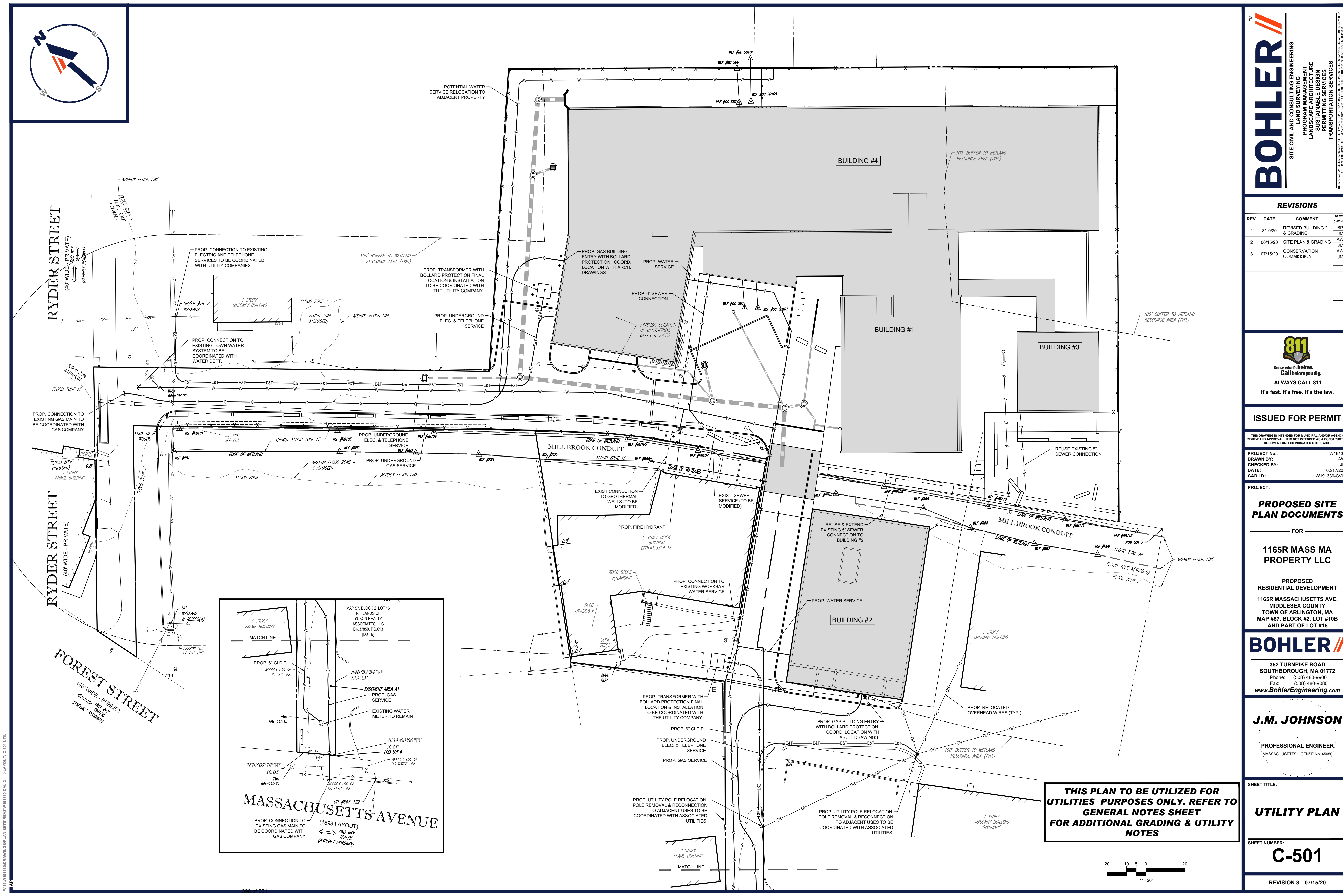
Please see the enclosed C-501 Utility Plan, prepared by Bohler Engineering, dated July 15, 2020.



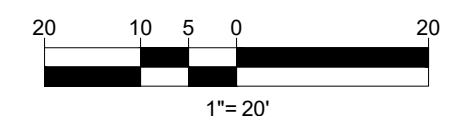
### Section 3.2.9 Utility Plan

Please see the enclosed C-501 Utility Plan, prepared by Bohler Engineering, dated July 15, 2020.





THIS PLAN TO BE UTILIZED FOR UTILITIES PURPOSES ONLY. REFER TO GENERAL NOTES SHEET FOR ADDITIONAL GRADING & UTILITY NOTES



BOHLER

SITE CIVIL AND CONSULTING ENGINEERING  
PROGRAM MANAGEMENT  
LANDSCAPE ARCHITECTURE  
SUSTAINABLE DESIGN  
PERMITTING SERVICES  
TRANSPORTATION SERVICES

TM

BOHLER

REVISIONS				
REV	DATE	COMMENT	CHECKED BY	DRAWN BY
1	3/10/20	REVISED BUILDING 2 & GRADING	BPB	JMJ
2	06/15/20	SITE PLAN & GRADING	AWP	JMJ
3	07/15/20	CONSERVATION COMMISSION	AWP	JMJ

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PROJECT No.: W191330  
DRAWN BY: AWP  
CHECKED BY: JMJ  
DATE: 02/17/2020  
CAD ID: W191330-CVL-3

PROJECT:

PROPOSED SITE PLAN DOCUMENTS

FOR

1165R MASS MA PROPERTY LLC

PROPOSED RESIDENTIAL DEVELOPMENT  
1165R MASSACHUSETTS AVE.  
MIDDLESEX COUNTY  
TOWN OF ARLINGTON, MA  
MAP #57, BLOCK #2, LOT #10B  
AND PART OF LOT #15

BOHLER

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J.M. JOHNSON

PROFESSIONAL ENGINEER  
MASSACHUSETTS LICENSE No. 45590

SHEET TITLE:

UTILITY PLAN

SHEET NUMBER:

C-501

REVISION 3 - 07/15/20

P:\191330\DRAWINGS\PLAN SETS\REV\W191330-CVL-3-3-LAYOUT-C-501-LT1.dwg



## Section 3.2.8 Tabulation of Proposed Buildings

The following table provides a breakdown of the proposed buildings, including type, gross area, number of stories, approximate height, number of units, number of bedrooms, and typical gross floor area.

BLDG NO.	TYPE	REHABILITATION or NEW CONSTRUCTION	SIZE GROSS SQ FT	NO. STORIES	APPROX. HEIGHT	NO. UNITS*	NO. BEDROOMS	TYP. GROSS FLOOR AREA
1	4-Story, Existing Brick/Beam	Rehabilitation	19,392	4	44'-0"	25	28	4,848
2	4-Story Residential over 1-Story Garage	New Construction	20,507	5	44'-0"	22	26	4,101
3	1-Story Existing Brick/Beam	Rehabilitation	1,850	1	20'-0"	0	0	1,850
4	4-Story Residential over 2-Story Garage	New Construction	98,632	6	68'-0"	83	133	16,439
<b>TOTALS</b>			<b>140,381</b>			<b>130</b>	<b>187</b>	
<i>*33 units (25% of the total) are at 80% AMI.</i>								

The following table provides information pertaining to Lot Coverage, Open Space, and Parking.

Total Site Acreage	2.05	Post site subdivision
Total Number Housing Units	130	
	<b>% of SITE</b>	
Buildings	41%	
Usable Open Space	9%	
Parking and Paved Areas	28%	
Unusable Open Space	22%	
<b>TOTAL</b>	<b>100%</b>	
Lot Coverage	69%	
Total Parking Spaces	135	
Ratio of Parking to Housing Units	1.04	

END OF SECTION



### Section 3.2.5.9 Wireless Communications Facilities

There are no plans to incorporate Wireless Communications Facilities (e.g. cell towers) on the site.



### Section 3.2.5.8 On-Site Power Generation

The geothermal system on Workbar will be kept active but separated from the remainder of the development.

The existing solar array on the roof of Workbar and Building 1 will be modified during the redevelopment process. The extent of the modifications will be determined by the proponents.

END OF SECTION



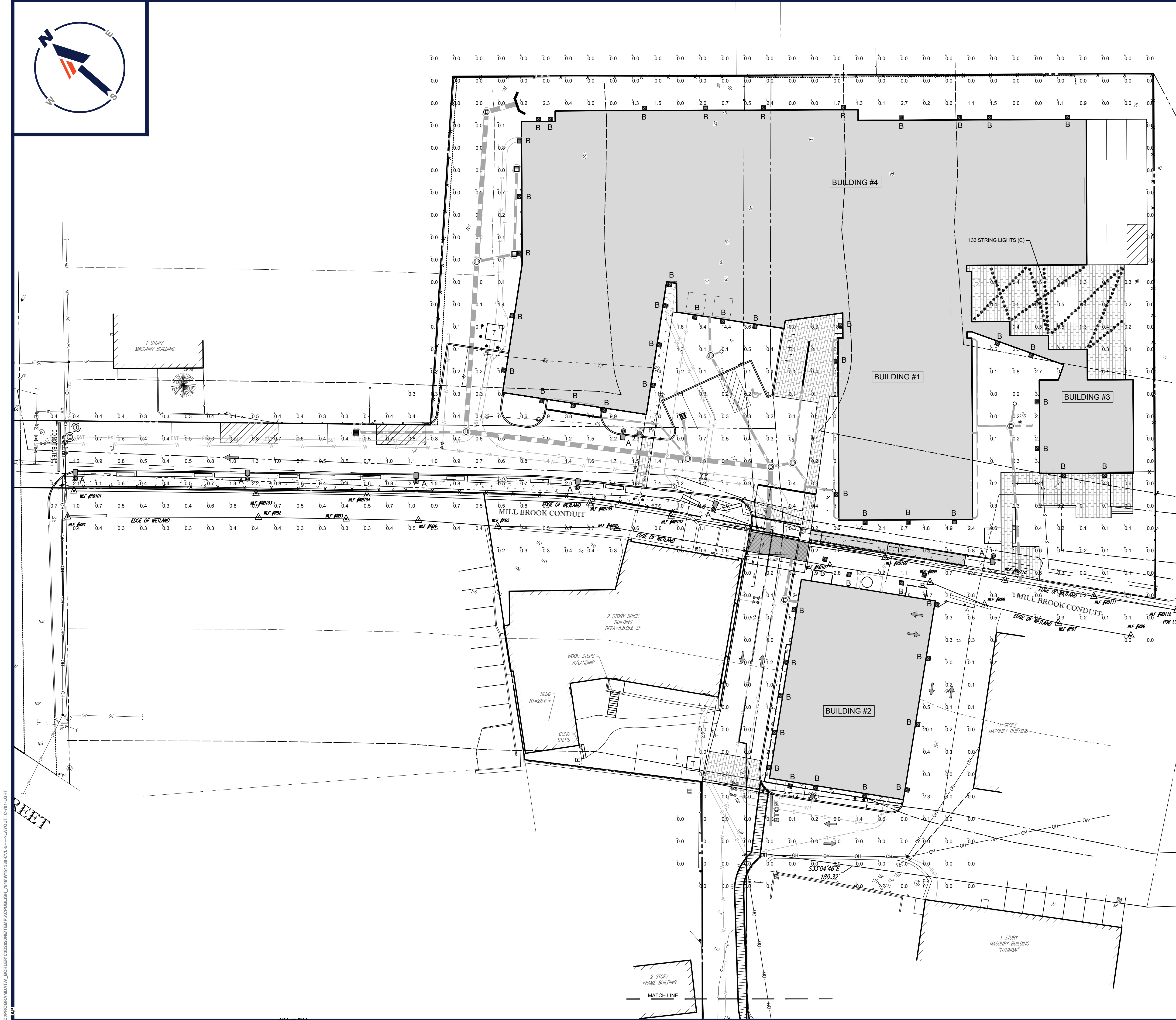
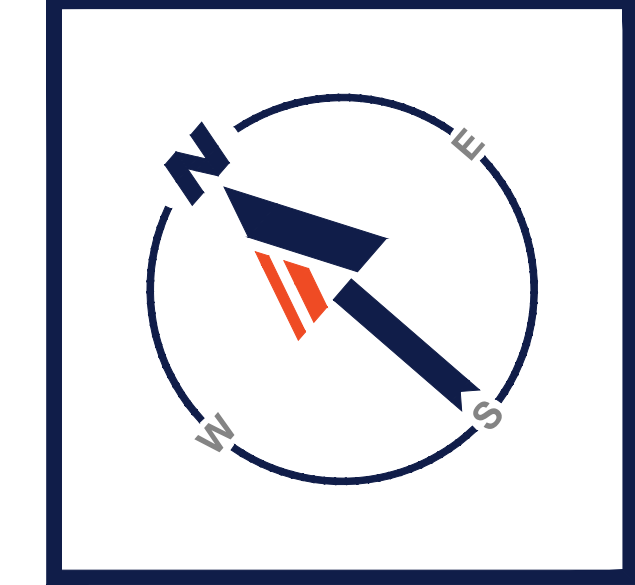
1165R Massachusetts Avenue

Ch. 40B ZBA Submission

### Section 3.2.5.7 Proposed Lighting and Photometric Analysis

Please see the enclosed Proposed Lighting and Photometric Analysis, prepared by Bohler Engineers, dated October 5, 2020.





### LIGHTING NOTES

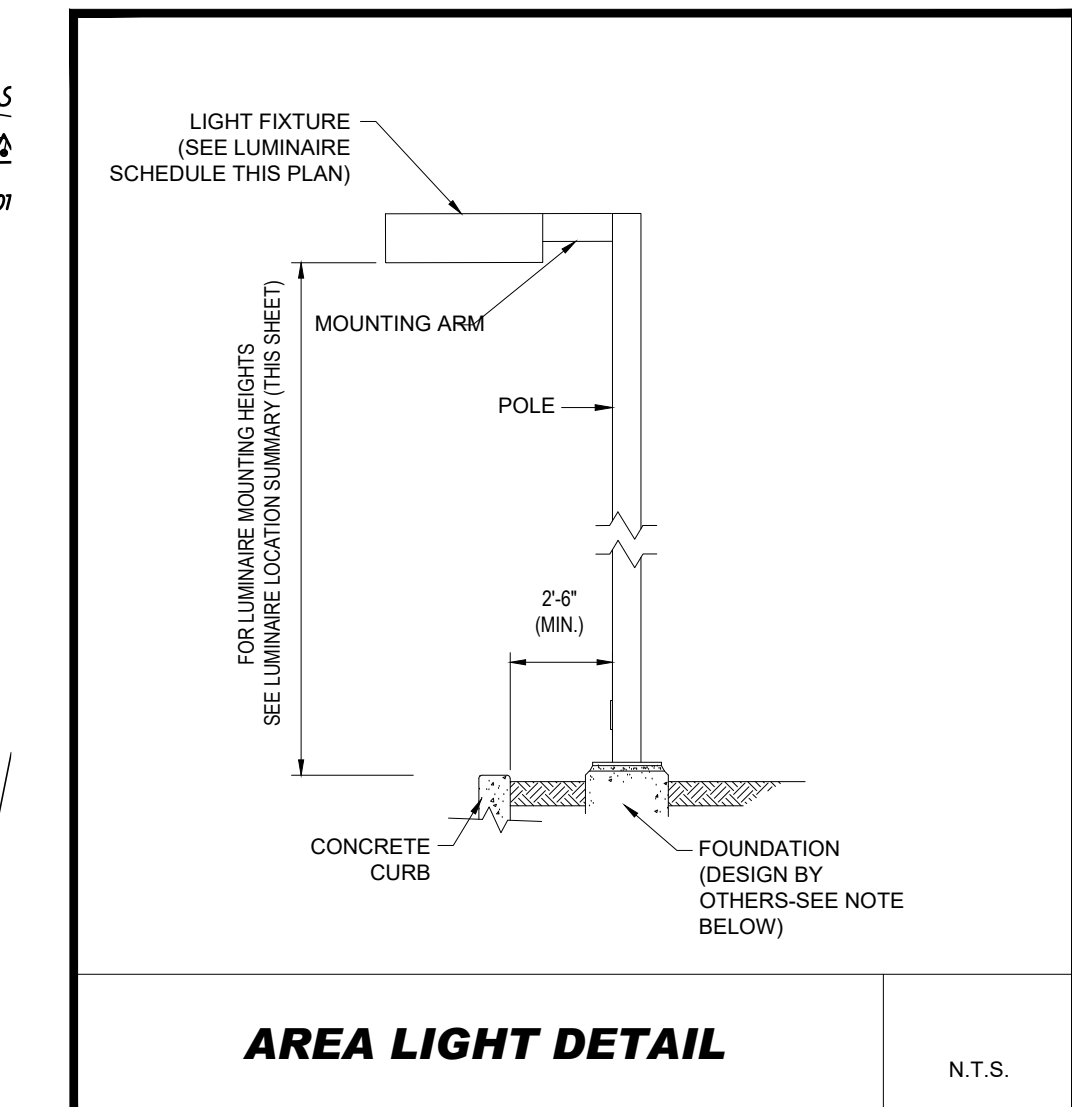
- THIS LIGHTING PLAN DEPICTS PROPOSED SUSTAINED ILLUMINATION LEVELS CALCULATED USING DATA PROVIDED BY THE NOTED MANUFACTURER(S). ACTUAL SUSTAINED SITE ILLUMINATION LEVELS AND PERFORMANCE OF LUMINAIRES MAY VARY DUE TO VARIATIONS IN WEATHER, ELECTRICAL VOLTAGE, TOLERANCE IN LAMPS, THE SERVICE LIFE OF EQUIPMENT AND LUMINAIRES AND OTHER RELATED VARIABLE FIELD CONDITIONS.
- THE LIGHT LOSS FACTORS USED IN THESE LIGHTING CALCULATIONS ARE 0.90 FOR ALL LED LUMINAIRES, 0.80 FOR ALL HIGH PRESSURE SODIUM LUMINAIRES OR 0.70 FOR ALL METAL HALIDE LUMINAIRES UNLESS OTHERWISE SPECIFIED. THESE FACTORS ARE INDICATIVE OF TYPICAL LIGHTING INDUSTRY MODELING STANDARDS.
- THE LIGHTING VALUES AND CALCULATION POINTS DEPICTED ON THIS PLAN ARE ALL ANALYZED ON A HORIZONTAL GEOMETRIC PLANE AT ELEVATION ZERO (GROUND LEVEL) UNLESS OTHERWISE NOTED. THE VALUES DEPICTED ON THIS PLAN ARE IN FOOTCANDELS.
- THE LUMINAIRES, LAMPS AND LENSES MUST BE REGULARLY INSPECTED/MAINTAINED TO ENSURE THAT THEY FUNCTION PROPERLY. THIS WORK SHOULD INCLUDE, BUT NOT BE LIMITED TO, FREQUENT VISUAL INSPECTIONS, CLEANING OF LENSES, AND RELAMPING (IF NECESSARY) AT LEAST ONCE EVERY SIX (6) MONTHS. FAILURE TO FOLLOW THE ABOVE STEPS COULD CAUSE THE LUMINAIRES, LAMPS AND LENSES TO FAIL PROPERLY TO FUNCTION.
- WHERE APPLICABLE, THE EXISTING CONDITION LIGHT LEVELS ILLUSTRATED ARE REPRESENTATIVE OF AN APPROXIMATION UTILIZING LABORATORY DATA FOR SIMILAR FIXTURES, UNLESS ACTUAL FIELD MEASUREMENTS ARE TAKEN WITH A LIGHT METER AND ARE, CONSEQUENTLY, APPROXIMATIONS ONLY. DUE TO FACTORS SUCH AS FIXTURE MAINTENANCE, EQUIPMENT TOLERANCES, WEATHER CONDITIONS, ETC. ACTUAL LIGHT LEVELS MAY DIFFER. EXISTING LIGHT LEVELS DEPICTED ON THIS PLAN SHOULD BE CONSIDERED APPROXIMATE.
- THIS LIGHTING PLAN IS INTENDED TO SHOW THE LOCATIONS AND TYPE OF LUMINAIRES, ONLY. POWER SYSTEM, CONDUITS, WIRING, VOLTAGES AND OTHER ELECTRICAL COMPONENTS ARE THE RESPONSIBILITY OF THE ARCHITECT, MEP AND/OR LIGHTING CONTRACTOR, AS INDICATED IN THE CONSTRUCTION CONTRACT DOCUMENTS. THESE ITEMS MUST BE INSTALLED AS REQUIRED BY STATE AND LOCAL REGULATIONS. LIGHT POLE BASES ARE THE RESPONSIBILITY OF THE STRUCTURAL ENGINEER, AS INDICATED IN THE CONSTRUCTION CONTRACT DOCUMENTS. CONTRACTOR IS RESPONSIBLE FOR INSTALLING LIGHTING FIXTURES AND APPURTENANCES IN ACCORDANCE WITH ALL APPLICABLE BUILDING AND ELECTRICAL CODES AND ALL OTHER APPLICABLE RULES, REGULATIONS, LAWS AND STATUTES.
- CONTRACTOR MUST BRING TO DESIGNER'S ATTENTION, PRIOR TO THE COMMENCEMENT OF CONSTRUCTION, ANY LIGHT LOCATIONS THAT CONFLICT WITH DRAINAGE, UTILITIES, OR OTHER STRUCTURES.
- IT IS THE LIGHTING CONTRACTOR'S RESPONSIBILITY TO COORDINATE WITH THE PROJECT ARCHITECT OR OWNER REGARDING THE POWER SOURCE(S) FROM WITHIN THE BUILDING, AND TIMING DEVICES NECESSARY TO MEET THE DESIGN INTENT.
- THE LIGHTING CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE CONTRACTOR REQUIREMENTS INDICATED IN THE SITE PLAN, INCLUDING BUT NOT LIMITED TO, GENERAL NOTES, GRADING AND UTILITY NOTES, SITE SAFETY, AND ALL GOVERNMENTAL RULES, LAWS, ORDINANCES, REGULATIONS AND THE LIKE.
- THE CONTRACTOR MUST VERIFY THAT INSTALLATION OF LIGHTING FIXTURES COMPLIES WITH THE REQUIREMENTS FOR SEPARATION FROM OVERHEAD ELECTRICAL WIRES PER STATE REGULATIONS.
- UPON OWNER'S ACCEPTANCE OF THE COMPLETED PROJECT, THE OWNER SHALL BE RESPONSIBLE FOR ALL MAINTENANCE, SERVICING, REPAIR AND INSPECTION OF THE LIGHTING SYSTEM AND ALL OF ITS COMPONENTS AND RELATED SYSTEMS, TO ENSURE ADEQUATE LIGHTING LEVELS ARE PRESENT AND FUNCTIONING AT ALL TIMES.

### NUMERIC SUMMARY

LABEL	CALCTYPE	UNITS	AVG	MAX	MIN	AVG/MIN	MAX/MIN
AREA SUMMARY	ILLUMINANCE	FC	1.14	17.3	0.0	0.00	0.00

### LUMINAIRE SCHEDULE

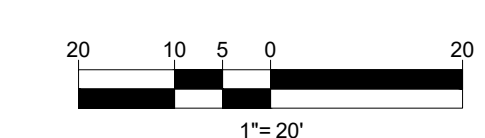
SYMBOL	QTY	ARRANGEMENT	LUMENS	LLF	DESCRIPTION
⊠	A	7 SINGLE	5067	0.90	STERNBERG LIGHTING LED AREA LIGHT MOUNTED @ 20'; 1750LEDH-1L30T3-MDL08-CA-SV2C
⊠	B	53 WALL MOUNT	1128	0.90	LIGMAN LIGHTING MATRIX SURFACE 4 LED WALL LIGHT MOUNTED @ 12'; UMT-31426-M-W30
⊠	C	133 STRING	15	0.90	DURALED STARGAZER LIGHT MOUNTED @ 8'; DL-SG-MD-22-10-SP



NOTE: THIS DETAIL IS FOR BID AND BUDGETARY PURPOSES ONLY. CONTRACTOR SHALL BE RESPONSIBLE FOR HAVING A FOUNDATION DESIGN PREPARED BY A QUALIFIED STRUCTURAL ENGINEER CONSIDERING LIGHTING MANUFACTURER REQUIREMENTS, LOCAL WIND LOADS AND SITE SPECIFIC SOIL PARAMETERS.

- SOME SITE CONDITIONS AND/OR LOCATIONS MAY REQUIRE VIBRATION DAMPENING MEASURES AS DETERMINED BY A STRUCTURAL ENGINEER.
- THE STRUCTURAL ENGINEER SHALL BE NOTIFIED OF THE INTENT TO MOUNT ANYTHING TO THE POLE, ASIDE FROM THE LIGHT FIXTURES, INCLUDING BUT NOT LIMITED TO CAMERAS, BANNERS, FLAGS, SIGNAGE, ETC. AS IT WILL IMPACT THE POLE AND FOUNDATION DESIGN.

**THIS PLAN TO BE UTILIZED FOR LIGHTING PURPOSES ONLY**



TM

**BOHLER**

SITE CIVIL AND CONSULTING ENGINEERING  
PROGRAM MANAGEMENT  
LANDSCAPE ARCHITECTURE  
SUSTAINABLE DESIGN  
PERMITTING SERVICES  
TRANSPORTATION SERVICES

REVISIONS				
REV	DATE	COMMENT	CHECKED BY	DRAWN BY
1	3/10/20	REVISED BUILDING 2 & GRADING	BPB	JMU
2	06/15/20	SITE PLAN & GRADING	AWP	JMU
3	07/15/20	CONSERVATION COMMISSION	AWP	JMU
4	08/21/20	CONSTRUCTION PHASING	AWP	JMU
5	10/05/20	ZBA SUBMITTAL PROGRESS SET	AWP	JMU

**811**

Know what's below.  
Call before you dig.  
ALWAYS CALL 811  
It's fast. It's free. It's the law.

**PRELIMINARY**

THIS DRAWING IS INTENDED FOR MUNICIPAL AND/OR AGENCY REVIEW AND APPROVAL. IT IS NOT INTENDED AS A CONSTRUCTION DOCUMENT UNLESS INDICATED OTHERWISE.

PROJECT No.: W191330  
DRAWN BY: AWP  
CHECKED BY: JMU  
DATE: 02/17/2020  
CAD ID: W191330-CVL-5

PROJECT:

**PROPOSED SITE PLAN DOCUMENTS**

FOR

**1165R MASS MA PROPERTY LLC**

PROPOSED  
RESIDENTIAL DEVELOPMENT

1165R MASSACHUSETTS AVE.  
MIDDLESEX COUNTY  
TOWN OF ARLINGTON, MA  
MAP #57, BLOCK #2, LOT #10B  
AND PART OF LOT #15

**BOHLER**

352 TURNPIKE ROAD  
SOUTHBOROUGH, MA 01772  
Phone: (508) 480-9900  
Fax: (508) 480-9080  
www.BohlerEngineering.com

**J.M. JOHNSON**  
**DRAFT: 10/05/20**  
PROFESSIONAL ENGINEER  
MASSACHUSETTS LICENSE NO. 45595

SHEET TITLE:  
**LIGHTING PLAN**

SHEET NUMBER:  
**C-701**

REVISION 5 - 10/05/20



## Section 3.2.5 – 3.2.5.6 Preliminary Site Development Plans

Please see the enclosed Preliminary Site Development Plan set containing the following drawings:

ZBA SECTION NO.	SHEET/ DWG NO.	TITLE	DATE
3.2.5- .1, .2, .3, .4	Sheet 1 of 4	ALTA Survey (existing conditions plan)	July 16, 2020
-	Sheet 2 of 4	ALTA Survey (flood zone plan)	July 16, 2020
-	Sheet 3 of 4	ALTA Survey (easement plan)	July 16, 2020
-	Sheet 4 of 4	ALTA Survey Notes	July 16, 2020
3.2.5- .5, .6	C301	Site Layout Plan	June 15, 2020
3.2.5- .2, .5	C401	Grading and Drainage Plan	June 15, 2020



NOTES:

- PROPERTY KNOWN AS LOT 10B AS SHOWN ON THE TOWN OF ARLINGTON, MIDDLESEX COUNTY, COMMONWEALTH OF MASSACHUSETTS, MAP NO. 57.
- LOT 9 AREA = 98,272 SQUARE FEET OR 2.256 ACRES.  
LOT 8D AREA = 2,960 SQUARE FEET OR 0.068 ACRES.  
TOTAL AREA = 101,232 SQUARE FEET OR 2.324 ACRES.
- LOCATION OF UNDERGROUND UTILITIES ARE APPROXIMATE. LOCATIONS AND SIZES ARE BASED ON UTILITY MARK-OUTS, ABOVE GROUND STRUCTURES THAT WERE VISIBLE & ACCESSIBLE IN THE FIELD, AND THE MAPS AS LISTED IN THE REFERENCES AVAILABLE AT THE TIME OF THE SURVEY. AVAILABLE AS-BUILT PLANS AND UTILITY MARK-OUT DOES NOT ENSURE MAPPING OF ALL UNDERGROUND UTILITIES AND STRUCTURES. BEFORE ANY EXCAVATION IS TO BEGIN, ALL UNDERGROUND UTILITIES SHOULD BE VERIFIED AS TO THEIR LOCATION, SIZE, AND TYPE BY THE PROPER UTILITY COMPANIES. CONTROL POINT ASSOCIATES, INC. DOES NOT GUARANTEE THE UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA EITHER IN SERVICE OR ABANDONED.
- THIS PLAN IS BASED ON INFORMATION PROVIDED BY A SURVEY PREPARED IN THE FIELD BY CONTROL POINT ASSOCIATES, INC. AND OTHER REFERENCE MATERIAL AS LISTED HEREON.
- THIS SURVEY WAS PREPARED WITH REFERENCE TO A TITLE REPORT PREPARED BY CHICAGO TITLE INSURANCE COMPANY, HAVING A COMMITMENT NO. 1921-0314, COMMITMENT DATE: DECEMBER 2, 2019. SEE SHEET 2 FOR COMMENTS TO THE SURVEY RELATED EXCEPTIONS IN SCHEDULE B, PART 2.
- BY GRAPHIC PLOTTING ONLY THE MAJORITY OF THE PROPERTY IS LOCATED IN FLOOD HAZARD ZONE X (AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOOD PLAIN). SOME OF THE PROPERTY IS LOCATED IN FLOOD AE (SPECIAL FLOOD HAZARD AREAS SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD, BASE FLOOD ELEVATIONS DETERMINED) & FLOOD HAZARD ZONE X SHADED (AREAS OF 0.2% ANNUAL CHANCE FLOOD, AREAS OF 1% ANNUAL CHANCE FLOOD WITH AVERAGE DEPTHS OF LESS THAN 1 FOOT OR WITH DRAINAGE AREAS LESS THAN 1 SQUARE MILE, AND AREAS PROTECTED BY LEVEES FROM 1/2 ANNUAL CHANCE FLOOD) PER REF. #2.
- ELEVATIONS REFER TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88), BASED ON GPS OBSERVATIONS UTILIZING THE KEYSTONE VRS NETWORK (KEYNETGPS) TAKEN AT THE TIME OF THE FIELD SURVEY.  
TEMPORARY BENCH MARKS SET:  
TBM-A: MAG NAIL SET AT ELEVATION 100.64.  
TBM-B: MAG NAIL SET AT ELEVATION 98.37.
- PRIOR TO CONSTRUCTION IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THAT THE BENCHMARKS ILLUSTRATED ON THIS SKETCH HAVE NOT BEEN DISTURBED AND THEIR ELEVATIONS HAVE BEEN CONFIRMED. ANY CONFLICTS MUST BE REPORTED PRIOR TO CONSTRUCTION.
- THE WETLAND DELINEATION LINE WAS FIELD LOCATED BY CONTROL POINT ASSOCIATES, INC.
- THERE IS NO OBSERVABLE EVIDENCE OF EARTH MOVING WORK, BUILDING CONSTRUCTION OR BUILDING ADDITIONS WITHIN RECENT MONTHS.
- CHANGES IN STREET RIGHT OF WAY LINES EITHER COMPLETED OR PROPOSED REVEALED IN THE TITLE REPORT AND REFERENCED MAPS HAVE BEEN SHOWN. THERE IS NO OBSERVABLE EVIDENCE OF RECENT STREET OR SIDEWALK CONSTRUCTION OR REPAIRS.
- THE SURVEYED PREMISE HAS 78 PAINTED PARKING SPACES, NONE OF WHICH ARE HANDICAP SPACES.

1. STORY MASONRY BUILDING  
FLOOD ZONE X  
FLOOD ZONE X (SHADED)  
APPROX FLOOD LINE (PER REF #2)

10' SINKER EASEMENT (PER REF #7)  
10' SINKER EASEMENT (PER REF #7)  
APPROX FLOOD LINE (PER REF #2)

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10' SINKER EASEMENT (PER REF #7)  
APPROX FLOOD LINE (PER REF #2)

RYDER STREET  
(40' WIDE - PRIVATE)  
(ASPHALT ROADWAY)

RYDER STREET  
(40' WIDE - PRIVATE)  
(ASPHALT ROADWAY)

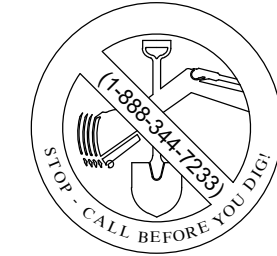
FOREST STREET  
(40' WIDE - PUBLIC)  
(TWO WAY TRAFFIC)  
(ASPHALT ROADWAY)

MASSACHUSETTS AVENUE  
(1893 LAYOUT)  
(TWO WAY TRAFFIC)  
(ASPHALT ROADWAY)

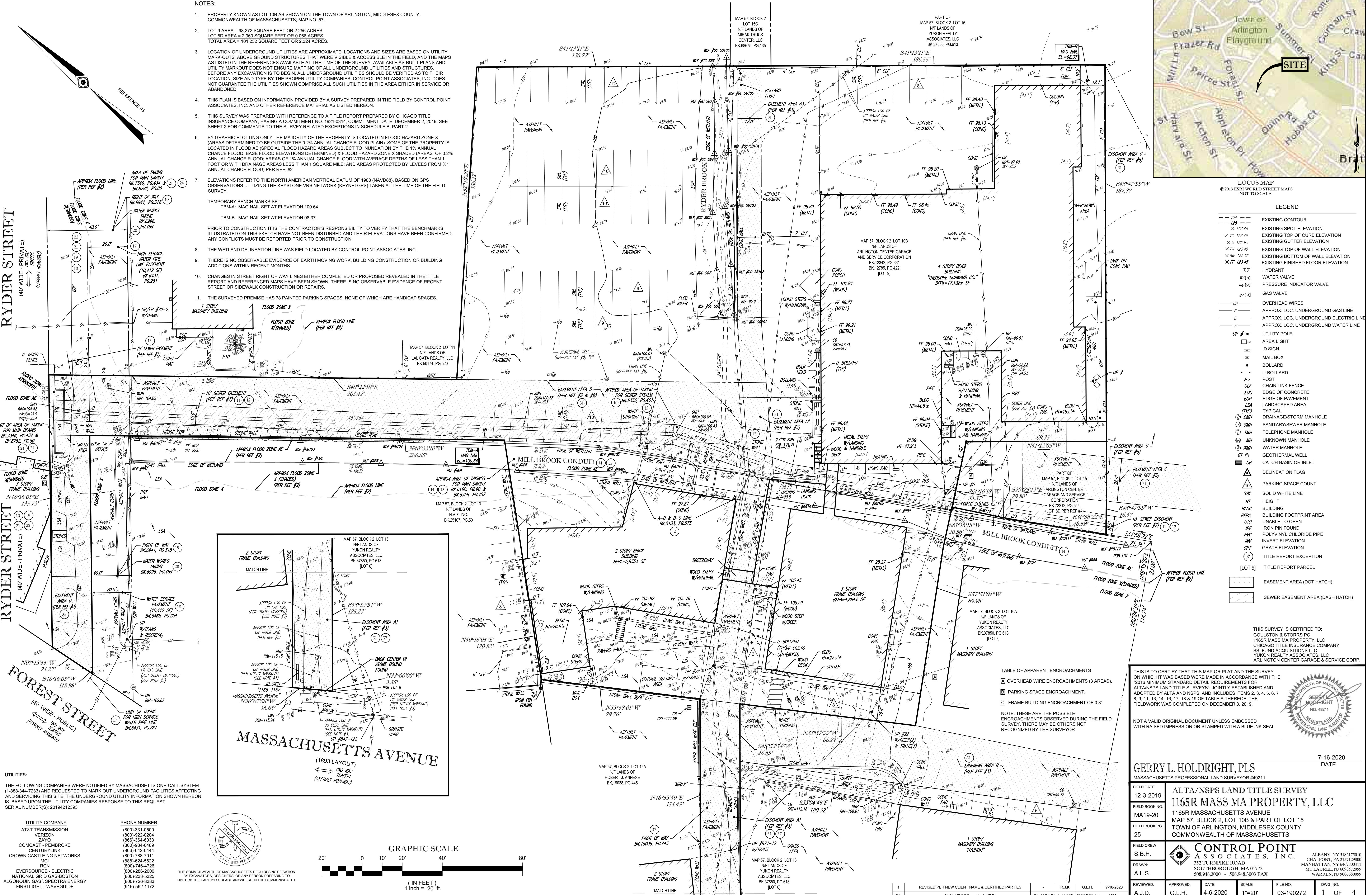
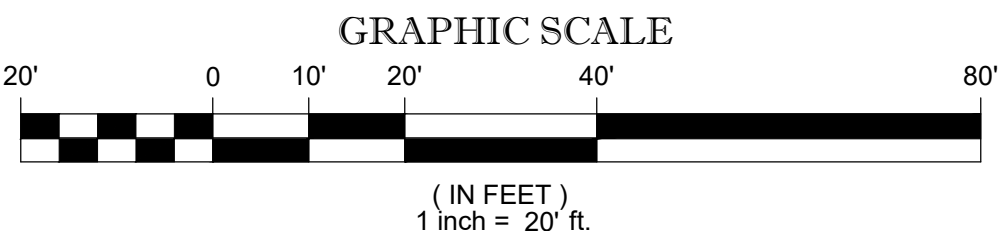
UTILITIES:  
THE FOLLOWING COMPANIES WERE NOTIFIED BY MASSACHUSETTS ONE-CALL SYSTEM (1-888-344-7233) AND REQUESTED TO MARK OUT UNDERGROUND FACILITIES AFFECTING AND SERVING THIS SITE. THE UNDERGROUND UTILITY INFORMATION SHOWN HEREON IS BASED UPON THE UTILITY COMPANIES RESPONSE TO THIS REQUEST.  
SERIAL NUMBERS: 20194212393

UTILITY COMPANY  
AT&T TRANSMISSION  
VERIZON  
ZAYO  
COMCAST - PERMBROKE  
CENTURYLINK  
CROWN CASTLE NG NETWORKS  
MCI  
RCN  
EVERSOURCE - ELECTRIC  
NATIONAL GRID GAS-BOSTON  
ALONGUIN GAS I SPECTRA ENERGY  
FIRSTLIGHT - WAVEGUIDE

PHONE NUMBER  
(800)-331-0500  
(800)-922-0204  
(866)-364-6033  
(800)-934-6489  
(866)-642-0444  
(800)-788-7011  
(866)-624-5622  
(800)-746-4726  
(800)-286-2000  
(800)-233-5325  
(800)-726-8383  
(915)-562-1172



THE COMMONWEALTH OF MASSACHUSETTS REQUIRES NOTIFICATION BY EXCAVATORS, DESIGNERS, OR ANY PERSON PREPARING TO DISTURB THE EARTH'S SURFACE ANYWHERE IN THE COMMONWEALTH.



LOCUS MAP  
© 2013 ESI WORLD STREET MAPS  
NOT TO SCALE


- LEGEND
- 124 --- EXISTING CONTOUR
  - 125 --- EXISTING SPOT ELEVATION
  - 121.45 --- EXISTING TOP OF CURB ELEVATION
  - 121.45 --- EXISTING GUTTER ELEVATION
  - 121.45 --- EXISTING TOP OF WALL ELEVATION
  - 121.45 --- EXISTING BOTTOM OF WALL ELEVATION
  - 121.45 --- EXISTING FINISHED FLOOR ELEVATION
  - HYDRANT
  - WV VALVE
  - PV VALVE
  - OV VALVE
  - OVERHEAD WIRES
  - APPROX. LOC. UNDERGROUND GAS LINE
  - APPROX. LOC. UNDERGROUND ELECTRIC LINE
  - APPROX. LOC. UNDERGROUND WATER LINE
  - UTILITY POLE
  - AREA LIGHT
  - ID SIGN
  - MAIL BOX
  - BOLLARD
  - U-BOLLARD
  - POST
  - CHAIN LINK FENCE
  - EDGE OF CONCRETE
  - EDGE OF PAVEMENT
  - LANDSCAPED AREA
  - TYPICAL DRAINAGE/STORM MANHOLE
  - SANITARY/SEWER MANHOLE
  - TELEPHONE MANHOLE
  - UNKNOWN MANHOLE
  - WATER MANHOLE
  - GEO THERMAL WELL
  - CATCH BASIN OR INLET
  - DELINEATION FLAG
  - PARKING SPACE COUNT
  - SOLID WHITE LINE
  - HEIGHT
  - BUILDING
  - BUILDING FOOTPRINT AREA
  - UNABLE TO OPEN
  - IRON PIN FOUND
  - PVC
  - POLYVINYL CHLORIDE PIPE
  - INVERT ELEVATION
  - GRATE ELEVATION
  - TITLE REPORT EXCEPTION
  - [LOT 9] TITLE REPORT PARCEL
  - EASEMENT AREA (DOT HATCH)
  - SEWER EASEMENT AREA (DASH HATCH)

TABLE OF APPARENT ENCROACHMENTS  
[A] OVERHEAD WIRE ENCROACHMENTS (3 AREAS).  
[B] PARKING SPACE ENCROACHMENT.  
[C] FRAME BUILDING ENCROACHMENT OF 0.8'.  
NOTE: THESE ARE THE POSSIBLE ENCROACHMENTS OBSERVED DURING THE FIELD SURVEY. THERE MAY BE OTHERS NOT RECOGNIZED BY THE SURVEYOR.

THIS IS TO CERTIFY THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IT WAS BASED WERE MADE IN ACCORDANCE WITH THE 2016 MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/NSPS LAND TITLE SURVEYS, JOINTLY ESTABLISHED AND ADOPTED BY ALTA AND NSPS, AND INCLUDES ITEMS 2, 3, 4, 5, 6, 7, 8, 9, 11, 13, 14, 16, 17, 18 & 19 OF TABLE A THEREOF. THE FIELDWORK WAS COMPLETED ON DECEMBER 3, 2019.

NOT A VALID ORIGINAL DOCUMENT UNLESS EMBOSSED WITH RAISED IMPRESSION OR STAMPED WITH A BLUE INK SEAL



GERRY L. HOLDRIGHT, PLS				7-16-2020	
MASSACHUSETTS PROFESSIONAL LAND SURVEYOR #49211				DATE	
FIELD DATE	ALTA/NSPS LAND TITLE SURVEY				
12-3-2019	1165R MASS MA PROPERTY, LLC				
FIELD BOOK NO.	1165R MASSACHUSETTS AVENUE				
MA19-20	MAP 57, BLOCK 2, LOT 10B & PART OF LOT 15				
FIELD BOOK PG.	TOWN OF ARLINGTON, MIDDLESEX COUNTY				
25	COMMONWEALTH OF MASSACHUSETTS				
FIELD CREW	CONTROL POINT ASSOCIATES, INC.			ALBANY, NY 5182175010	
S.B.H.				CHALFONT, PA 2151728800	
DRAWN:	352 TURNPIKE ROAD			MANHATTAN, NY 6467890411	
A.L.S.	SOUTHBOROUGH, MA 01772			MT LAUREL, NJ 0985752099	
	508.948.3000 - 508.948.3003 FAX			WARREN, NJ 9086680099	
REVIEWED:	APPROVED:	DATE	SCALE	FILE NO.	DWG. NO.
A.J.D.	G.L.H.	4-6-2020	1"=20'	03-190272	1 OF 4

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CONTROL POINT ASSOCIATES, INC. ALL RIGHTS RESERVED.  
NO PORTION OF THIS MAP OR PLAT MAY BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, WITHOUT THE WRITTEN PERMISSION OF CONTROL POINT ASSOCIATES, INC. IS PROHIBITED.

RYDER STREET  
(40' WIDE - PRIVATE)

FOREST STREET  
(40' WIDE - PUBLIC)

FLOOD ZONE X (SHADED)

FLOOD ZONE AE

APPROX FLOOD LINE (PER REF #2)

FLOOD ZONE X (SHADED)

APPROX FLOOD LINE (PER REF #2)

FLOOD ZONE X (SHADED)

FLOOD ZONE X

FLOOD ZONE X (SHADED)

FLOOD ZONE X (SHADED)

APPROX FLOOD LINE (PER REF #2)

FLOOD ZONE X

APPROX FLOOD ZONE AE (PER REF #2)

FLOOD ZONE AE

APPROX FLOOD ZONE X (SHADED) (PER REF #2)

APPROX FLOOD LINE (PER REF #2)

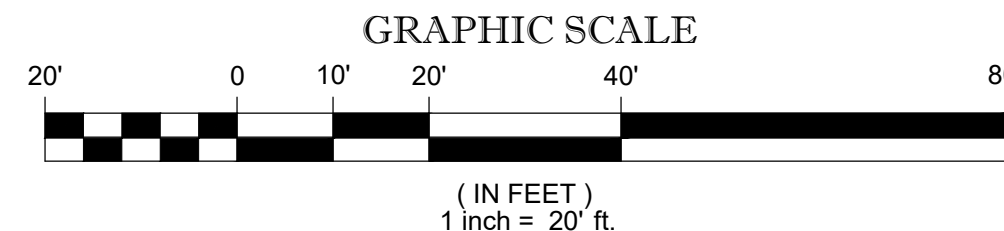
MILL BROOK CONDUIT

FLOOD ZONE AE

FLOOD ZONE X (SHADED)

FLOOD ZONE X

APPROX FLOOD LINE (PER REF #2)



1	REVISED PER NEW CLIENT NAME & CERTIFIED PARTIES	-	R.J.K.	G.L.H.	7-16-2020
No.	DESCRIPTION OF REVISION	FIELD CREW	DRAWN	APPROVED	DATE
FIELD DATE	12-3-2019	ALTA/NSPS LAND TITLE SURVEY			
FIELD BOOK NO.	MA19-20	1165R MASS MA PROPERTY, LLC			
FIELD BOOK PG.	25	1165R MASSACHUSETTS AVENUE			
FIELD CREW	S.B.H.	MAP 57, BLOCK 2, LOT 10B & PART OF LOT 15			
DRAWN	A.L.S.	TOWN OF ARLINGTON, MIDDLESEX COUNTY			
REVIEWED	A.J.D.	COMMONWEALTH OF MASSACHUSETTS			
APPROVED	G.L.H.	DATE	SCALE	FILE NO.	DWG. NO.
		4-6-2020	1"=20'	03-190272	2 OF 4

THIS SURVEY IS CERTIFIED TO:  
GOULSTON & STORRS PC  
1165R MASS MA PROPERTY, LLC  
CHICAGO TITLE INSURANCE COMPANY  
SSI FUND ACQUISITIONS, LLC  
YUKON REALTY ASSOCIATES, LLC  
ARLINGTON CENTER GARAGE & SERVICE CORP.

THIS IS TO CERTIFY THAT THIS MAP OR PLAT AND THE SURVEY  
ON WHICH IT WAS BASED WERE MADE IN ACCORDANCE WITH THE  
"2016 MINIMUM STANDARD DETAIL REQUIREMENTS FOR  
ALTA/NSPS LAND TITLE SURVEYS", JOINTLY ESTABLISHED AND  
ADOPTED BY ALTA AND NSPS, AND INCLUDES ITEMS 2, 3, 4, 5, 6, 7  
8, 9, 11, 13, 14, 16, 17, 18 & 19 OF TABLE A THEREOF. THE  
FIELDWORK WAS COMPLETED ON DECEMBER 3, 2019.

NOT A VALID ORIGINAL DOCUMENT UNLESS EMBOSSED  
WITH RAISED IMPRESSION OR STAMPED WITH A BLUE INK SEAL



GERRY L. HOLDRIGHT, PLS  
MASSACHUSETTS PROFESSIONAL LAND SURVEYOR #49211

7-16-2020  
DATE

MAP 57, BLOCK 2 LOT 15C  
N/F LANDS OF  
MIRAK TRUCK  
CENTER, LLC  
BK.68675, PG.135

PART OF  
MAP 57, BLOCK 2 LOT 15  
N/F LANDS OF  
YUKON REALTY  
ASSOCIATES, LLC  
BK.37850, PG.613

MAP 57, BLOCK 2 LOT 10B  
N/F LANDS OF  
ARLINGTON CENTER GARAGE  
AND SERVICE CORPORATION  
BK.12342, PG.661  
BK.12785, PG.422  
[LOT 9]

MAP 57, BLOCK 2 LOT 11  
N/F LANDS OF  
LALICATA REALTY, LLC  
BK.50174, PG.520

MAP 57, BLOCK 2 LOT 13  
N/F LANDS OF  
H.A.F. INC.  
BK.25107, PG.50

MAP 57, BLOCK 2 LOT 15A  
N/F LANDS OF  
ROBERT J. ANNESE  
BK.19038, PG.445

MAP 57, BLOCK 2 LOT 16  
N/F LANDS OF  
YUKON REALTY  
ASSOCIATES, LLC  
BK.37850, PG.613  
[LOT 6]

MAP 57, BLOCK 2 LOT 16A  
N/F LANDS OF  
YUKON REALTY  
ASSOCIATES, LLC  
BK.37850, PG.613  
[LOT 7]

PART OF  
MAP 57, BLOCK 2 LOT 15  
N/F LANDS OF  
ARLINGTON CENTER  
GARAGE AND SERVICE  
CORPORATION  
BK.72212, PG.544  
(LOT 8D PER REF #4)

S41°13'11"E  
126.72'

S41°13'11"E  
186.55'

N52°40'20"E  
156.12'

S48°47'55"W  
187.87'

S48°47'55"W  
46.47'

S61°16'18"W  
33.37'

S61°16'18"W  
20.50'

S29°25'12"E  
29.80'

S31°56'22"E  
48.52'

N41°12'05"W

69.85'

N40°16'05"E  
120.82'

N33°58'01"W  
79.76'

N48°52'54"E  
154.45'

S48°52'54"W  
28.65'

N33°57'33"W  
88.24'

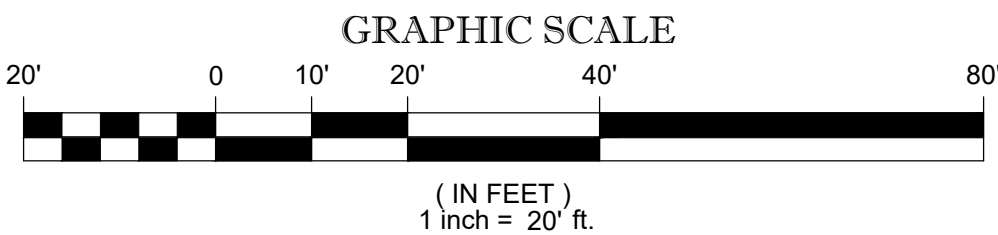
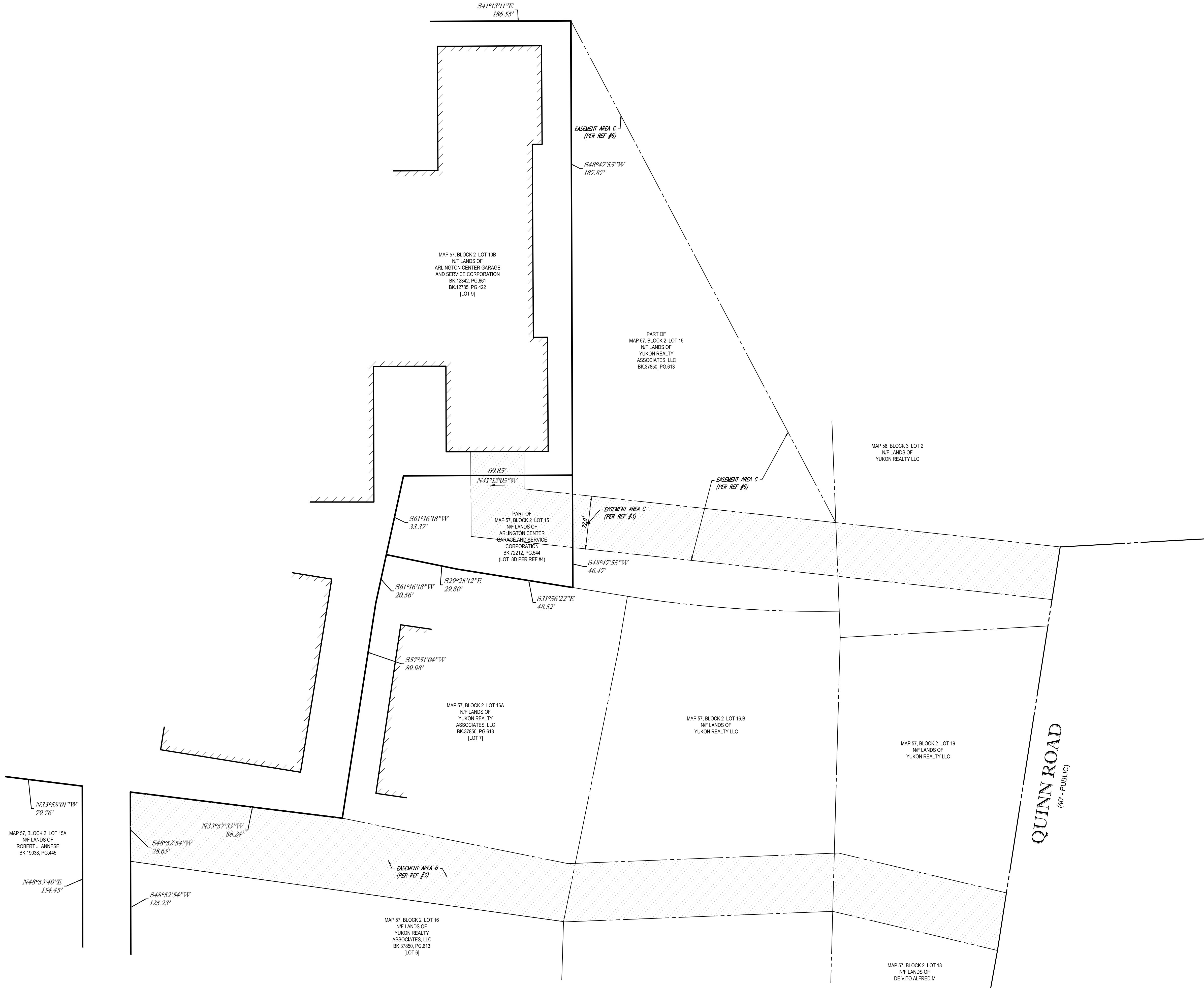
S57°51'04"W  
89.98'

MATCH LINE

REFERENCE #3



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1	REVISED PER NEW CLIENT NAME & CERTIFIED PARTIES	-	R.J.K.	G.L.H.	7-16-2020
No.	DESCRIPTION OF REVISION	FIELD CREW	DRAWN	APPROVED	DATE

THIS SURVEY IS CERTIFIED TO:  
GOULSTON & STORRS PC  
1165R MASS MA PROPERTY, LLC  
CHICAGO TITLE INSURANCE COMPANY  
SSI FUND ACQUISITIONS LLC  
YUKON REALTY ASSOCIATES, LLC  
ARLINGTON CENTER GARAGE & SERVICE CORP.

THIS IS TO CERTIFY THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IT WAS BASED WERE MADE IN ACCORDANCE WITH THE "2016 MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/NSPS LAND TITLE SURVEYS", JOINTLY ESTABLISHED AND ADOPTED BY ALTA AND NSPS, AND INCLUDES ITEMS 2, 3, 4, 5, 6, 7, 8, 9, 11, 13, 14, 16, 17, 18 & 19 OF TABLE A THEREOF. THE FIELDWORK WAS COMPLETED ON DECEMBER 3, 2019.

NOT A VALID ORIGINAL DOCUMENT UNLESS EMBOSSED WITH RAISED IMPRESSION OR STAMPED WITH A BLUE INK SEAL.

7-16-2020  
DATE

**GERRY L. HOLDRIGHT, PLS**  
MASSACHUSETTS PROFESSIONAL LAND SURVEYOR #49211

FIELD DATE  
12-3-2019

FIELD BOOK NO.  
MA19-20

FIELD BOOK PG.  
25

FIELD CREW  
S.B.H.

DRAWN:  
A.L.S.

REVIEWED:  
A.J.D.

APPROVED:  
G.L.H.

DATE  
4-6-2020

SCALE  
1"=20'

FILE NO.  
03-190272

DWG. NO.  
3 OF 4

**ALTA/NSPS LAND TITLE SURVEY**  
**1165R MASS MA PROPERTY, LLC**  
1165R MASSACHUSETTS AVENUE  
MAP 57, BLOCK 2, LOT 10B & PART OF LOT 15  
TOWN OF ARLINGTON, MIDDLESEX COUNTY  
COMMONWEALTH OF MASSACHUSETTS

**CONTROL POINT ASSOCIATES, INC.**  
352 TURNPIKE ROAD  
SOUTH BOKROUGH, MA 01772  
508.948.3000 - 508.948.3003 FAX

ALBANY, NY 5183175010  
CHALFONT, PA 2157126900  
MANHATTAN, NY 6467800411  
MT LAUREL, NJ 6098572999  
WARREN, NJ 9086600999



THIS SURVEY WAS PREPARED WITH REFERENCE TO A TITLE REPORT PREPARED BY CHICAGO TITLE INSURANCE COMPANY, HAVING A COMMITMENT NO. 1921-0314, COMMITMENT DATE: DECEMBER 2, 2019, WHERE THE FOLLOWING SURVEY RELATED EXCEPTIONS APPEAR IN SCHEDULE B - SECTION 2:

GENERAL EXCEPTIONS 1 THRU 6, 29, 30, 34, AND 35 ARE NOT SURVEY RELATED AND HAVE NOT BEEN COMMENTED ON AS A PART OF THIS SURVEY.

7 INTENTIONALLY DELETED.

8 INTENTIONALLY DELETED.

9 INTENTIONALLY DELETED.

10 RIGHTS OF OTHERS ENTITLED THERETO TO USE THE 40' RIGHT OF WAY (NOW KNOWN AS RYDER STREET) ENUMERATED IN DEED DATED JUNE 11, 1923 RECORDED IN BOOK 4624, PAGE 488. SEE PLAN IN PLAN BOOK 4624, END - **RYDER STREET IS SHOWN.**

11 ORDER OF TAKING BY THE METROPOLITAN DISTRICT COMMISSION DATED JULY 9, 1926 RECORDED IN BOOK 4993, PAGE 166 AS SHOWN ON SURVEY - **PLAN BOOK 376, PLAN 41 UNCLEAR, SEWER EASEMENT SHOWN PER REFERENCE #7.**

12 EASEMENT TO THE COMMONWEALTH OF MASSACHUSETTS THROUGH ITS METROPOLITAN DISTRICT COMMISSION DATED AUGUST 19, 1927 RECORDED IN BOOK 5133, PAGE 573 AS SHOWN ON SURVEY - **SEWER EASEMENT, A-D & B-C LINES SHOWN.**

13 TAKING BY THE TOWN OF ARLINGTON FOR A SEWER SYSTEM DATED JUNE 25, 1928 RECORDED IN BOOK 5249, PAGE 121 AS SHOWN ON SURVEY - RYDER STREET. -**10' WIDE SEWER EASEMENT SHOWN.**

14 TAKING BY THE TOWN OF ARLINGTON FOR MAIN DRAINS DATED OCTOBER 18, 1937 RECORDED IN BOOK 6160, PAGE 90 AS SHOWN ON SURVEY -**MILL BROOK CONDUIT SHOWN.**

15 TAKING BY THE TOWN OF ARLINGTON FOR MAIN DRAINS DATED DECEMBER 26, 1939 RECORDED IN BOOK 6356, PAGE 457 AS SHOWN ON SURVEY -**MILL BROOK CONDUIT SHOWN.**

16 TAKING BY THE TOWN OF ARLINGTON FOR A SEWER SYSTEM DATED DECEMBER 26, 1939 RECORDED IN BOOK 6356, PAGE 461 AS SHOWN ON SURVEY. -**APPROX AREA OF TAKING SHOWN.**

17 ORDER OF TAKING BY THE METROPOLITAN DISTRICT COMMISSION FOR A HIGH SERVICE PIPE LINE DATED SEPTEMBER 12, 1940 RECORDED IN BOOK 6431, PAGE 281 AS SHOWN ON SURVEY - RYDER STREET. -**LIMIT OF TAKING IN FOREST STREET SHOWN.**

18 EASEMENT TO THE COMMONWEALTH OF MASSACHUSETTS FOR WATER SERVICE DATED DECEMBER 10, 1940 RECORDED IN BOOK 6465, PAGE 254 AS SHOWN ON THE SURVEY - RYDER STREET. -**EASEMENT SHOWN.**

19 RIGHT OF WAY OVER 40' ROW (RYDER STREET) IN DEED DATED JANUARY 7, 1946 RECORDED IN BOOK 6941, PAGE 318. -**RYDER STREET SHOWN.**

20 TAKING BY THE TOWN OF ARLINGTON FOR WATER WORKS DATED JUNE 18, 1946 RECORDED IN BOOK 6996, PAGE 489 AS SHOWN ON SURVEY - RYDER STREET. -**AREA OF WATER WORKS TAKING SHOWN.**

21 ORDER OF TAKING BY THE TOWN OF ARLINGTON FOR MAIN DRAINS DATED OCTOBER 4, 1948 RECORDED IN BOOK 7346, PAGE 434 AS SHOWN ON SURVEY - RYDER STREET. -**AREA OF TAKING IN RYDER STREET SHOWN.**

22 RIGHT OF WAY GRANTED BY INSTRUMENT DATED MAY 13, 1951 RECORDED IN BOOK 7767, PAGE 408. (RYDER STREET) -**40' RIGHT OF WAY KNOWN AS RYDER STREET SHOWN.**

23 INTENTIONALLY DELETED.

24 ORDER OF TAKING BY THE TOWN OF ARLINGTON FOR MAIN DRAINS DATED JULY 30, 1956 RECORDED IN BOOK 8782, PAGE 80 AS SHOWN ON SURVEY - RYDER STREET. -**AREA OF TAKING IN RYDER STREET SHOWN.**

25 INTENTIONALLY DELETED.

26 INTENTIONALLY DELETED.

27 INTENTIONALLY DELETED.

28 INTENTIONALLY DELETED.

31 SUBJECT TO AND TOGETHER WITH THE RIGHTS AND EASEMENTS SET FORTH IN EASEMENT AGREEMENT DATED DECEMBER 31, 2002 RECORDED IN BOOK 37850, PAGE 624. -**EASEMENT AREAS A1, A2, A3, B, C & D SHOWN. EASEMENT AREAS C & D ARE EACH SHOWN HEREON DIFFERENTLY PER REFERENCES 3 & 6.**

32 INTENTIONALLY DELETED.

33 NOTICE OF LEASE NAMING ARLINGTON CENTER GARAGE AND SERVICE CORPORATION, LESSOR AND MIRAK CHEVROLET, INC., LESSEE DATED SEPTEMBER 26, 2007 RECORDED IN BOOK 50215, PAGE 176. -**LOCATION OF 15,375 SF LEASE AREA IS NOT DESCRIBED OTHER THAN BEING A PORTION OF LOT 9, NOT PLOTTABLE.**

36 INTENTIONALLY DELETED.

37 RIGHT OF WAY CONTAINED IN DEED DATED MAY 9, 1968 RECORDED IN BOOK 19038, PAGE 445 AS SHOWN ON THE SURVEY. **RIGHT OF WAY IS PART OF EASEMENT AREA A1, SHOWN.**

EXHIBIT A

LOT 9 (1165-1167 MASSACHUSETTS AVENUE)

THE LAND WITH THE BUILDINGS THEREON SITUATED ON THE NORTHEASTERLY SIDE OF MASSACHUSETTS AVENUE, ARLINGTON, MIDDLESEX COUNTY, MASSACHUSETTS, NOW KNOWN AS AND NUMBERED 1165 REAR MASSACHUSETTS AVENUE, BEING LOT 9 SHOWN ON A PLAN ENTITLED "PLAN OF LOTS AND EASEMENTS IN ARLINGTON, MA" DATED OCTOBER 23, 2006 BY RIM ENGINEERING CO., INC. AND RECORDED WITH THE MIDDLESEX SOUTH DISTRICT REGISTRY OF DEEDS AS PLAN 1072 OF 2007 AND BEING ALSO SHOWN ON PLAN 110 OF 2019. SAID LOT 9 CONTAINS 98,272 SQUARE FEET OF LAND ACCORDING TO SAID PLAN.

LOT 8D (REAR OF MASSACHUSETTS AVENUE)

THE LAND WITH THE IMPROVEMENTS THEREON SITUATED ON THE NORTHEASTERLY SIDE OF MASSACHUSETTS AVENUE, ARLINGTON, MIDDLESEX COUNTY, MASSACHUSETTS BEING LOT 8D ON A PLAN ENTITLED "PLAN OF LAND IN ARLINGTON, MA" DATED DECEMBER 28, 2018 BY RIM ENGINEERING CO., INC. RECORDED WITH THE MIDDLESEX SOUTH DISTRICT REGISTRY OF DEEDS AS PLAN 110 OF 2019. SAID LOT 8D CONTAINS 2,960 SQUARE FEET OF LAND ACCORDING TO SAID PLAN.

TOGETHER WITH THE RIGHT AND EASEMENT TO USE THAT PORTION OF RYDER STREET (40' WIDE) NOT INCLUDED IN LOT 9 FROM FOREST STREET TO THE SOUTHWESTERLY BOUNDARY OF LOT 9 FOR ALL PURPOSES FOR WHICH STREETS AND WAYS MAY BE USED IN THE TOWN OF ARLINGTON.

TOGETHER WITH THE RIGHTS AND EASEMENTS SET FORTH IN EASEMENT AGREEMENT DATED DECEMBER 31, 2002 RECORDED IN BOOK 37850, PAGE 624.

REFERENCES:

- THE TAX ASSESSOR'S MAP OF ARLINGTON, MIDDLESEX COUNTY, MAP 57.
- MAP ENTITLED "NATIONAL FLOOD INSURANCE PROGRAM, FIRM, FLOOD INSURANCE RATE MAP, MIDDLESEX COUNTY, MASSACHUSETTS (ALL JURISDICTIONS) PANEL 416 OF 656," COMMUNITY-PANEL NUMBER 250177 0416 E, MAP EFFECTIVE: JUNE 4, 2010.
- MAP ENTITLED "PLAN OF LOTS AND EASEMENTS IN ARLINGTON, MA" DATED OCTOBER 23, 2006, RECORDED IN THE SOUTH MIDDLESEX REGISTRY OF DEEDS AS PLAN NO. 1072 OF 2007.
- MAP ENTITLED "PLAN OF LAND IN ARLINGTON, MA" DATED DECEMBER 28, 2018, RECORDED IN THE SOUTH MIDDLESEX REGISTRY OF DEEDS AS PLAN NO. 110 OF 2019.
- WATER MAPPING PROVIDED BY THE TOWN ENGINEERING DEPARTMENT.
- MAP ENTITLED "PLAN OF LOTS AND EASEMENTS IN ARLINGTON, MA" DATED JANUARY 21, 2003, RECORDED IN THE SOUTH MIDDLESEX REGISTRY OF DEEDS AS PLAN NO. 83 OF 2003 IN BOOK 37850 PAGE 612.
- MAP ENTITLED "PLAN OF LAND IN ARLINGTON MASS" DATED SEPTEMBER 13, 1945, RECORDED IN THE SOUTH MIDDLESEX REGISTRY OF DEEDS AS PLAN NO. 172 OF 1946.
- MAP ENTITLED "AS-BUILT GEOTHERMAL SITE PLAN 1167R MASSACHUSETTS AVE, ARLINGTON, MA PREPARED FOR ACHIEVE RENEWABLE" DATES JANUARY 4, 2016 PREPARED BY PAUL LINDHOLM, P.E.
- MAP ENTITLED "ALTA / ACSM LAND TITLE SURVEY IN ARLINGTON, MA," DATED JANUARY 21, 2003 PREPARED BY RIM ENGINEERING CO.

THIS SURVEY IS CERTIFIED TO:  
GOULSTON & STORRS PC  
1165R MASS MA PROPERTY, LLC  
CHICAGO TITLE INSURANCE COMPANY  
SSI FUND ACQUISITIONS LLC  
YUKON REALTY ASSOCIATES, LLC  
ARLINGTON CENTER GARAGE & SERVICE CORP.

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NOT A VALID ORIGINAL DOCUMENT UNLESS EMBOSSED WITH RAISED IMPRESSION OR STAMPED WITH A BLUE INK SEAL



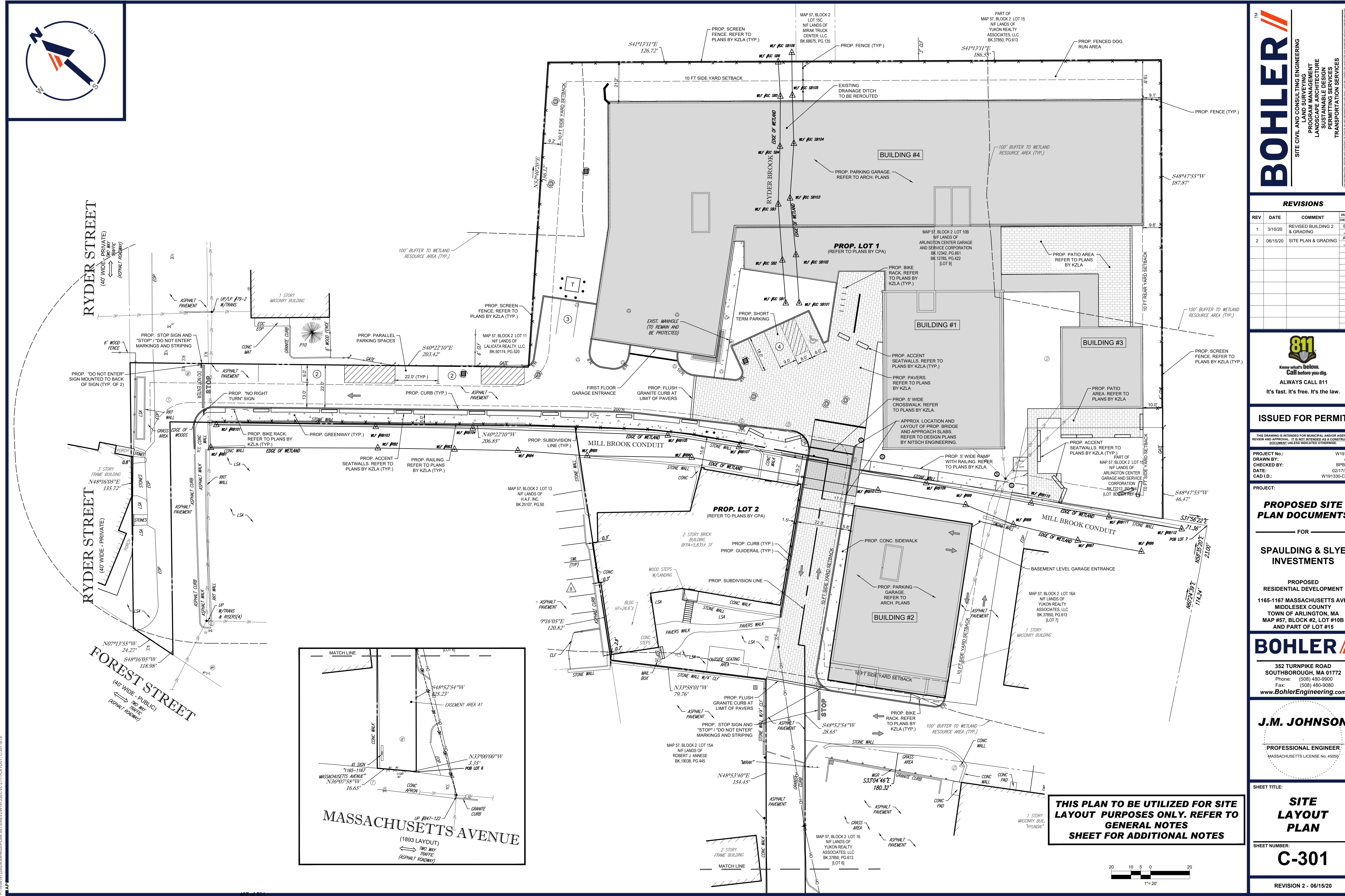
GERRY L. HOLDRIGHT, PLS  
MASSACHUSETTS PROFESSIONAL LAND SURVEYOR #49211

7-16-2020  
DATE

1	REVISED PER NEW CLIENT NAME & CERTIFIED PARTIES	-	R.J.K.	G.L.H.	7-16-2020
No.	DESCRIPTION OF REVISION	FIELD CREW	DRAWN	APPROVED	DATE

FIELD DATE 12-3-2019	ALTA/NSPS LAND TITLE SURVEY 1165R MASS MA PROPERTY, LLC				
FIELD BOOK NO. MA19-20	1165R MASSACHUSETTS AVENUE MAP 57, BLOCK 2, LOT 10B & PART OF LOT 15 TOWN OF ARLINGTON, MIDDLESEX COUNTY COMMONWEALTH OF MASSACHUSETTS				
FIELD BOOK PG. 25	 <b>CONTROL POINT ASSOCIATES, INC.</b> 352 TURNPIKE ROAD SOUTHBOROUGH, MA 01772 508.948.3000 - 508.948.3003 FAX ALBANY, NY 5183175010 CHALFONT, PA 2157129600 MANHATTAN, NY 6467800411 MT LAUREL, NJ 6098572999 WARREN, NJ 9086600999				
FIELD CREW S.B.H.	DRAWN: A.L.S.				
REVIEWED: A.J.D.	APPROVED: G.L.H.	DATE 4-6-2020	SCALE N/A	FILE NO. 03-190272	DWG. NO. 4 OF 4





P:\191330\DRAWINGS\PLAN SETS\REV2\191330-CVL-2--LAYOUT-C-301-SITE

BOHLER

SITE CIVIL AND CONSULTING ENGINEERING  
PROGRAM MANAGEMENT  
LANDSCAPE ARCHITECTURE  
SUSTAINABLE DESIGN  
PERMITTING SERVICES  
TRANSPORTATION SERVICES

REVISIONS				
REV	DATE	COMMENT	CHECKED BY	DRAWN BY
1	3/10/20	REVISED BUILDING 2 & GRADING	BPB	JMJ
2	06/15/20	SITE PLAN & GRADING	AWP	JMJ

811

Know what's below.  
Call before you dig.  
ALWAYS CALL 811  
It's fast. It's free. It's the law.

ISSUED FOR PERMIT

THIS DRAWING IS INTENDED FOR MUNICIPAL AND/OR AGENCY REVIEW AND APPROVAL. IT IS NOT INTENDED AS A CONSTRUCTION DOCUMENT UNLESS INDICATED OTHERWISE.

PROJECT No.: W191330  
DRAWN BY: AWP  
CHECKED BY: BPB/JMJ  
DATE: 02/17/2020  
CAD LID.: W191330-CVL-2

PROPOSED SITE PLAN DOCUMENTS

FOR

SPAULDING & SLYE INVESTMENTS

PROPOSED RESIDENTIAL DEVELOPMENT  
1165-1167 MASSACHUSETTS AVE.  
MIDDLESEX COUNTY  
TOWN OF ARLINGTON, MA  
MAP #57, BLOCK #2, LOT #10B  
AND PART OF LOT #15

BOHLER

352 TURNPIKE ROAD  
SOUTHBOROUGH, MA 01772  
Phone: (508) 480-9900  
Fax: (508) 480-9080  
www.BohlerEngineering.com

J.M. JOHNSON

PROFESSIONAL ENGINEER  
MASSACHUSETTS LICENSE NO. 45959

SHEET TITLE:

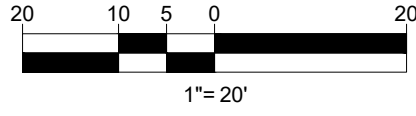
SITE LAYOUT PLAN

SHEET NUMBER:

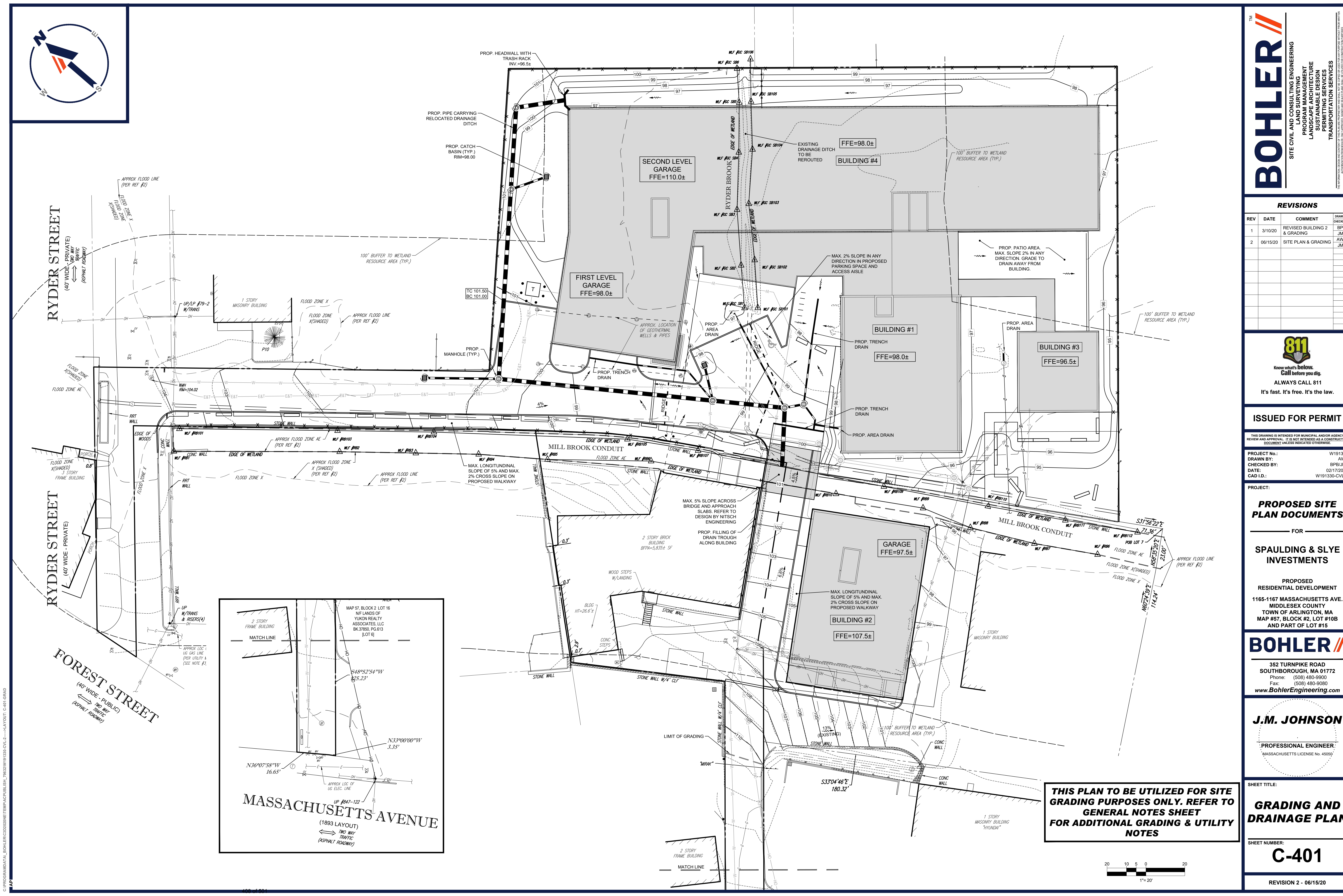
C-301

REVISION 2 - 06/15/20

THIS PLAN TO BE UTILIZED FOR SITE LAYOUT PURPOSES ONLY. REFER TO GENERAL NOTES SHEET FOR ADDITIONAL NOTES







BOHLER

SITE CIVIL AND CONSULTING ENGINEERING  
PROGRAM MANAGEMENT  
LANDSCAPE ARCHITECTURE  
SUSTAINABLE DESIGN  
PERMITTING SERVICES  
TRANSPORTATION SERVICES

REVISIONS				
REV	DATE	COMMENT	CHECKED BY	DRAWN BY
1	3/10/20	REVISED BUILDING 2 & GRADING	BPB	JMJ
2	06/15/20	SITE PLAN & GRADING	AWP	JMJ

811

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PROJECT No.: W191330  
DRAWN BY: AWP  
CHECKED BY: BPB/JMJ  
DATE: 02/17/2020  
CAD ID: W191330-CVL-2

PROJECT:

PROPOSED SITE PLAN DOCUMENTS

FOR

SPAULDING & SLYE INVESTMENTS

PROPOSED RESIDENTIAL DEVELOPMENT  
1165-1167 MASSACHUSETTS AVE.  
MIDDLESEX COUNTY  
TOWN OF ARLINGTON, MA  
MAP #57, BLOCK #2, LOT #10B  
AND PART OF LOT #15

BOHLER

352 TURNPIKE ROAD  
SOUTHBOROUGH, MA 01772  
Phone: (508) 480-9900  
Fax: (508) 480-9080  
www.BohlerEngineering.com

J.M. JOHNSON

PROFESSIONAL ENGINEER  
MASSACHUSETTS LICENSE NO. 45050

SHEET TITLE:

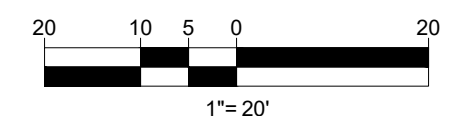
GRADING AND DRAINAGE PLAN

SHEET NUMBER:

C-401

REVISION 2 - 06/15/20

THIS PLAN TO BE UTILIZED FOR SITE GRADING PURPOSES ONLY. REFER TO GENERAL NOTES SHEET FOR ADDITIONAL GRADING & UTILITY NOTES



C:\PROGRAMDATA\BOHLER\32020\NETEMPAC\PUBLISH\_78523W191330-CVL-2---LAYOUT: C-401-GRAD



#### Section 3.2.4 Evidence of Site Control

Please see the enclosed letter to Jessica Malcolm of MassHousing, dated June 26, 2020. This letter demonstrates control of the project site and the future land contribution by Joint Venture agreement.



Arlington Center Garage and Service Corporation

June 26, 2020

Jessica Malcolm  
Acting Manager of Comprehensive Permit Programs  
MassHousing  
One Beacon Street  
Boston, MA 02108

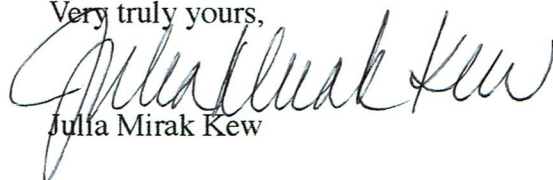
Re: 1165R Massachusetts Avenue, Arlington, MA

Dear Ms. Malcolm:

On behalf of Arlington Center Garage and Service Corporation, owner of 1165R Massachusetts Avenue, Arlington, MA ("Arlington Center"), this letter certifies that the joint venture agreement forming 1165R Mass MA Property LLC gives it authority to file and take action on the Site Approval / Project Eligibility Application filed pursuant to 769 CMR 56.04 for the above-referenced property.

1165R Mass MA Property LLC is a Joint Venture of Mirak Mill LLC (an affiliate of Arlington Center) and 1165R Mass MA Partners LLC whereby Arlington Center will be contributing the land on behalf of Mirak Mill LLC. Both Mirak Mill LLC and Arlington Center are signatories to the joint venture agreement with 1165R MA Partners LLC.

Very truly yours,



Julia Mirak Kew

4854785.1



## Southern Middlesex - 20/20 Perfect Vision i2 Document Detail Report

Current datetime: 12/5/2019 4:16:17 PM

Doc#	Document Type	Town	Book/Page	File Date	Consideration
12342363	DEED		12342/661	12/07/1972	475750.00
<b>Property-Street Address and/or Description</b>					
SEE RECORD					
<b>Grantors</b>					
GLADSTONE WILLIAM, SCHWAMB CORP					
<b>Grantees</b>					
ARLINGTON CENTER GARAGE & SERVICE CORP					
<b>References-Book/Pg Description Recorded Year</b>					
<b>Registered Land Certificate(s)-Cert# Book/Pg</b>					



1075-24  
1883-1075

1075-24

BK12342 PG661

MASSACHUSETTS QUITCLAIM DEED INDIVIDUAL (LONG FORM) 882

William Gladstone, Receiver of The Schwamb Corporation, in Proceedings for an Arrangement in U.S.D.C. for District of Massachusetts, No. 72-354,

of

County, Massachusetts

being unmarried, for consideration paid, and in full consideration of Four hundred Seventy-five thousand seven hundred and fifty (\$475,750.00) dollars grants to Arlington Center Garage & Service Corp., a Massachusetts Corporation with a usual place of business at 430 Massachusetts Avenue, Arlington with quitclaim covenants

the land in

(Description and encumbrances, if any)

The land in Arlington (Middlesex County) Massachusetts, described in the following deeds:

- Deed from Edwin S. Farmer to The Theodore Schwamb Company dated May 20, 1903 and recorded with Middlesex South District Deeds, Book 3041, Page 508;
- Deed from Edwin S. Farmer to The Theodore Schwamb Company dated December 7, 1911, and recorded with said deeds Book 3657, Page 284;
- Deed from Walter H. Pierce and Clara S. Pierce, his wife, to The Theodore Schwamb Company dated March 31, 1913 and recorded with said deeds Book 3776, Page 491;
- Deed from Walter H. Peirce and Clara S. Peirce, his wife, to the Theodore Schwamb Company dated July 27, 1922 and recorded with said deeds Book 4539, Page 78;
- Deed from Abbie F. Farmer to The Theodore Schwamb Company dated June 11, 1923 and recorded with said deeds Book 4624, Page 488.

There is excluded from the above conveyance the land described in the following deeds:

- Deed from The Theodore Schwamb Company to Clara S. Peirce dated August 8, 1922 and recorded with said deeds Book 4571, Page 583;
- Deed from The Theodore Schwamb Company to Layne - New York Co., Inc. dated January 7, 1946 and recorded with said deeds in Book 6941, Page 318;
- Deed from The Theodore Schwamb Company to Ernest W. Larson et al, dated October 16, 1950 and recorded with said deeds Book 7656, Page 72.

Meaning and intending to convey and hereby conveying all the premises owned by The Schwamb Corporation in the rear of Forest Street, and Massachusetts Avenue in said Arlington whether or not specifically described in the first five deeds above referred to.

Said premises are conveyed subject to easements of record as they now apply to the above conveyed premises insofar as the same are in force.

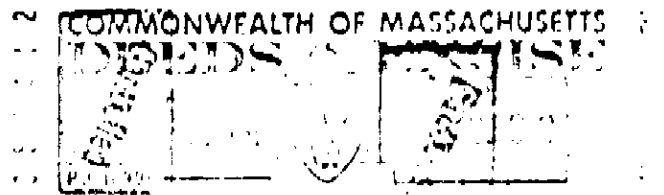
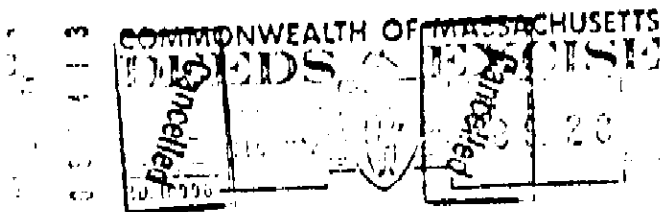
The grantor hereby also conveys all buildings, structures and improvements now on the aforesaid land and the fixtures belonging to the Schwamb Corporation and used in connection therewith including, if any, furnaces, heaters, heating equipment, oil and gas burners and fixtures appurtenant thereto, hot water heaters, plumbing and bathroom fixtures, electric and other lighting fixtures, fences, gates and ventilators.



Witness my hand and seal this 5 day of December 1972.

*William F. Gladstone*

*Reverend*



The Commonwealth of Massachusetts

Middlesex

ss.

*December 5,*

1972.

Then personally appeared the above named

William Gladstone

and acknowledged the foregoing instrument to be his free act and deed, before me

*Charles F. Kent*

Notary Public — Justice of the Peace

My Commission Expires *July 14* 1978

CHAPTER 183 SEC. 6 AS AMENDED BY CHAPTER 497 OF 1969

Every deed presented for record shall contain or have endorsed upon it the full name, residence and post office address of the grantee and a recital of the amount of the full consideration thereof in dollars or the nature of the other consideration therefor, if not delivered for a specific monetary sum. The full consideration shall mean the total price for the conveyance without deduction for any liens or encumbrances assumed by the grantee or remaining thereon. All such endorsements and recitals shall be recorded as part of the deed. Failure to comply with this section shall not affect the validity of any deed. No register of deeds shall accept a deed for recording unless it is in compliance with the requirements of this section.



## Southern Middlesex - 20/20 Perfect Vision i2 Document Detail Report

Current datetime: 12/5/2019 4:16:18 PM

Doc#	Document Type	Town	Book/Page	File Date	Consideration
60139640	CONFDEED		12785/422	04/25/1975	475750.00
<b>Property-Street Address and/or Description</b>					
REAR OF FOREST ST					
<b>Grantors</b>					
GLADSTONE WILLIAM, SCHWAMB CORP					
<b>Grantees</b>					
ARLINGTON CENTER GARAGE AND SERVICE CORP					
<b>References-Book/Pg Description Recorded Year</b>					
22249/157 ORD 1992, 24728/37 ORD 1994, 33968/224 ORD 2001, 50215/176 LEASE 2007					
<b>Registered Land Certificate(s)-Cert# Book/Pg</b>					



APR 25-75 AM 10:50 0882E\*\*1075

BK 12785 PG 422

MASSACHUSETTS QUITCLAIM DEED INDIVIDUAL (LONG FORM) 687  
CONFIRMATORY DEED

William Gladstone, Receiver of The Schwamb Corporation, in Proceedings  
for an Arrangement in U.S.D.C. for District of Massachusetts, No. 72-354,

County, Massachusetts

being unmarried, for consideration paid, and in full consideration of Four-Hundred Seventy-Five  
Thousand Seven-Hundred- and Fifty (\$475,750.00) Dollars  
grants to Arlington Center Garage and Service Corporation, a Massachusetts  
Corporation with a usual place of business at 430 Massachusetts Avenue,  
Arlington

with quitclaim covenants

the land in

(Description and encumbrances, if any)

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Meaning and intending to convey and hereby conveying all the  
premises owned by The Schwamb Corporation in the rear of Forest Street  
and Massachusetts Avenue in said Arlington whether or not specifically  
described in the first five deeds above referred to.

Said premises are conveyed subject to easements of record as  
they now apply to the above conveyed premises insofar as the same are  
in force.

The grantor hereby also conveys all buildings, structures  
and improvements now on the aforesaid land and the fixtures belonging  
to the Schwamb Corporation and used in connection therewith including,  
if any, furnaces, heaters, heating equipment, oil and gas burners and  
fixtures appurtenant thereto, hot water heaters, plumbing and bathroom  
fixtures, electric and other lighting fixtures, fences, gates and  
ventilators.

This Deed is given in confirmation of a Deed dated  
and recorded in Middlesex South District Registry of Deeds  
in Book 12342 at Page 659

MARGINAL REFERENCE REQUESTED

BOOK 12342 PAGE 659

(\*Individual — Joint Tenants — Tenants in Common — Tenants by the Entirety.)



Witness...my..... hand and seal this ..... day of February, 1975.

*William Gladstone Receiver*  
 William Gladstone, Receiver

The Commonwealth of Massachusetts

*Suffolk*

ss.

February 11 1975

Then personally appeared the above named William Gladstone

and acknowledged the foregoing instrument to be his free act and deed, before me

*Milton L. Chain*

Notary Public — Justice of the Peace

My Commission Expires

*September 2 1977*



CHAPTER 183 SEC. 6 AS AMENDED BY CHAPTER 497 OF 1969

Every deed presented for record shall contain or have embodied upon it the full name, residence and post office address of the grantee and a recital of the amount of the full consideration therefor in dollars or the nature of the other consideration therefor and the date of the specific monetary sum. The full consideration shall be the total price for the conveyance without deduction for any taxes or charges assumed by the grantee or retained by the grantor. All such instruments and records shall be recorded as part of the public records of the county; this section shall not affect the validity of any instrument recorded prior to the date of the enactment of this section.



f2



2019 00016788  
 Bk: 72212 Pg: 544 Doc: DEED  
 Page: 1 of 2 02/08/2019 01:13 PM

### QUITCLAIM DEED

YUKON REALTY ASSOCIATES, LLC, a Delaware limited liability company duly qualified to do business in the Commonwealth of Massachusetts and having a usual place of business at 1125 Massachusetts Avenue, Arlington, Massachusetts 02474, (the "Grantor"), for consideration paid of One Hundred Fifty Thousand Dollars (\$150,000.00), grants to ARLINGTON CENTER GARAGE AND SERVICE CORPORATION, a Massachusetts corporation with a usual place of business at 438 Massachusetts Avenue, Arlington, Massachusetts 02474, with QUITCLAIM COVENANTS, that certain parcel of vacant land containing 2950 square feet of land located adjacent to the Mill Brook Conduit in Arlington, Massachusetts, and shown as Lot 8D on a plan of land to be recorded herewith, as "Plan of Land in Arlington, MA"; scale 1" = 40' dated December 28, 2018 by RIM Engineering Co., Inc. and being more particularly bounded and described as follows:

NORTHEASTERLY: By Lot 9 on said Plan 69.86 feet;  
 SOUTHEASTERLY: By Lot 8B on said Plan 46.33 feet;  
 SOUTHWESTERLY: By Mill Brook Conduit on said Plan 29.80 feet and 48.88 feet; and  
 NORTHWESTERLY: By Lot 9 on said Plan 33.25 feet.

Said premises are conveyed subject to all easements, restrictions, and conditions of record insofar as the same are in full force and effect.

For Grantor's title, see Deed from Arlington Center Garage and Service Corporation to Yukon Realty Associates, LLC dated December 31, 2002 and recorded with Middlesex South District Registry of Deeds in Book 37850, Page 613.

return to:  
**DONNA M. COYLE**  
**GILMAN, MCLAUGHLIN & HANRAHAN LLP**  
**101 MERRIMAC STREET, SUITE 810**  
**BOSTON, MA 02114**

MASSACHUSETTS EXCISE TAX  
 Southern Middlesex District ROD # 001  
 Date: 02/08/2019 01:13 PM  
 Ctrl# 295683 16833 Doc# 00016788  
 Fee: \$684.00 Cons: \$150,000.00

Vacant Lot 8D adjacent to Mill Brook Conduit in Arlington, Massachusetts

Plan # 11D-2019



EXECUTED as a sealed instrument this 7 day of February, 2019.

YUKON REALTY ASSOCIATES, LLC

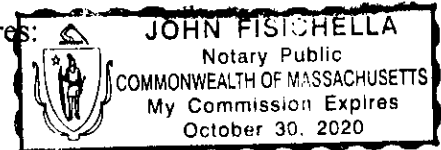
By: Edward Y. Mirak  
 Name: Edward Y. Mirak  
 Title: Manager  
 Hereunto duly authorized

COMMONWEALTH OF MASSACHUSETTS

Essex, ss.

On this 7 day of February, 2019, before me, the undersigned notary public, personally appeared Edward Y. Mirak, as Manager of Yukon Realty Associates, LLC, proved to me through satisfactory evidence of identification, which was Edward Mirak, to be the person whose name is signed on the preceding or attached document, and acknowledged to me that he signed it voluntarily for its stated purpose as Manager of YUKON REALTY ASSOCIATES, LLC and acknowledge said instrument to be the free act and deed of YUKON REALTY ASSOCIATES, LLC.

[Signature]  
 Notary Public  
 My Commission Expires:





CONTROL POINT ASSOCIATES, INC. ALL RIGHTS RESERVED  
NO PORTION OF THIS MAP OR ANY INFORMATION CONTAINED HEREIN MAY BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, WITHOUT THE WRITTEN PERMISSION OF CONTROL POINT ASSOCIATES, INC. IS PROHIBITED.

TOWN OF ARLINGTON

DATE \_\_\_\_\_  
THE SUBDIVISION CONTROL LAW HAS NOT  
BEEN ADOPTED BY THE TOWN OF ARLINGTON

FOR REGISTRY USE ONLY

FOREST STREET  
(40' WIDE - PUBLIC)  
TWO WAY  
(ASPHALT PAVED)

RYDER STREET  
(40' WIDE - PRIVATE)  
TWO WAY  
(ASPHALT PAVED)

MILL BROOK CONDUIT

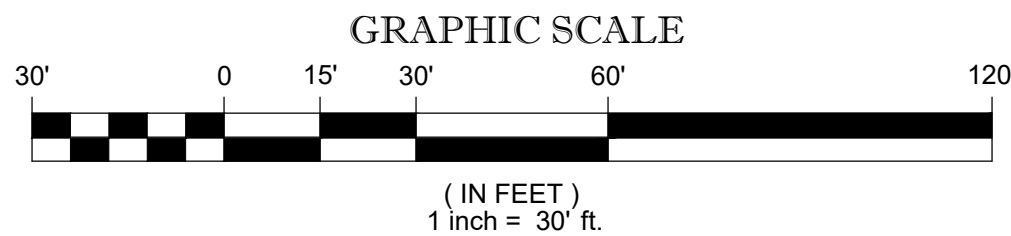
MASSACHUSETTS AVENUE  
(1893 LAYOUT)  
TWO WAY  
(ASPHALT PAVED)



LOCUS MAP  
© 2013 ESRI WORLD STREET MAPS  
NOT TO SCALE

- NOTES:
1. PROPERTY KNOWN AS LOT 10B & 15 AS SHOWN ON THE TOWN OF ARLINGTON, MIDDLESEX COUNTY, COMMONWEALTH OF MASSACHUSETTS; MAP NO. 57.
  2. PROPOSED LOT 1 = 84,850 SQUARE FEET OR 1.948 ACRES.  
PROPOSED LOT 2 = 16,384 SQUARE FEET OR 0.376 ACRES.  
TOTAL AREA = 101,234 SQUARE FEET OR 2.324 ACRES.
  3. THIS PLAN IS BASED ON INFORMATION PROVIDED BY A SURVEY PREPARED IN THE FIELD BY CONTROL POINT ASSOCIATES, INC. AND OTHER REFERENCE MATERIAL AS LISTED HEREON.
  4. BY GRAPHIC PLOTTING ONLY THE MAJORITY OF THE PROPERTY IS LOCATED IN FLOOD HAZARD ZONE X (AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOOD PLAIN). SOME OF THE PROPERTY IS LOCATED IN FLOOD AE (SPECIAL FLOOD HAZARD AREAS SUBJECT TO UNDAUNATION BY THE 1% ANNUAL CHANCE FLOOD, BASE FLOOD ELEVATIONS DETERMINED PER REF. #2).
  5. THE PURPOSE OF THIS PLAN IS TO DIVIDE LOT 10B INTO PROPOSED LOT 1 AND PROPOSED LOT 2 FROM TAX LOTS STATED ABOVE IN NOTE #1. PROPOSED LOT 2 DOES NOT HAVE FRONTAGE ON A PUBLIC WAY BUT HAS ACCESS THROUGH EXISTING EASEMENTS.

- REFERENCES:
1. THE TAX ASSESSOR'S MAP OF ARLINGTON, MIDDLESEX COUNTY, MAP 57.
  2. MAP ENTITLED "NATIONAL FLOOD INSURANCE PROGRAM, FIRM, FLOOD INSURANCE RATE MAP, MIDDLESEX COUNTY, MASSACHUSETTS (ALL JURISDICTIONS) PANEL 416 OF 656," COMMUNITY-PANEL NUMBER 250177 0416 E, MAP EFFECTIVE: JUNE 4, 2010.
  3. MAP ENTITLED "PLAN OF LOTS AND EASEMENTS IN ARLINGTON, MA" DATED OCTOBER 23, 2006, RECORDED IN THE SOUTH MIDDLESEX REGISTRY OF DEEDS AS PLAN NO. 1072 OF 2007.
  4. MAP ENTITLED "PLAN OF LAND IN ARLINGTON, MA" DATED DECEMBER 28, 2018, RECORDED IN THE SOUTH MIDDLESEX REGISTRY OF DEEDS AS PLAN NO. 110 OF 2019.
  5. WATER MAPPING PROVIDED BY THE TOWN ENGINEERING DEPARTMENT.



THIS IS TO CERTIFY THAT THIS SURVEY HAS BEEN  
PERFORMED IN THE FIELD UNDER MY SUPERVISION,  
AND IS SUBSTANTIALLY CORRECT TO THE DEGREE OF  
ACCURACY SHOWN HEREON.



GERRY L. HOLDRIGHT, PLS  
MASSACHUSETTS PROFESSIONAL LAND SURVEYOR #49211

5-4-2020  
DATE

1	REVISED LOT CONFIGURATION	N/A	R.J.K.	G.L.H.	5-4-2020
No.	DESCRIPTION OF REVISION	FIELD CREW	DRAWN	APPROVED	DATE
FIELD DATE	12-3-2019	<b>SUBDIVISION PLAN OF LAND</b> <b>ARLINGTON CENTER GARAGE &amp; SERVICE CORP.</b> 1167 MASSACHUSETTS AVENUE MAP 57, BLOCK 2, LOT 10B & PART OF LOT 15 TOWN OF ARLINGTON, MIDDLESEX COUNTY COMMONWEALTH OF MASSACHUSETTS			
FIELD BOOK NO.	MA19-20				
FIELD BOOK PG.	25				
FIELD CREW	S.B.H.				
DRAWN:	R.J.K.				
REVIEWED:	A.J.D.	APPROVED:	G.L.H.	DATE:	1-2-2020
SCALE:	1"=30'	FILE NO.	03-190272	DWG. NO.	1 OF 1

**CONTROL POINT ASSOCIATES, INC.**

352 TURNPIKE ROAD  
SOUTH BOKROUGH, MA 01772  
508.948.3000 - 508.948.3003 FAX

ALBANY, NY 5183175010  
CHALFONT, PA 2157126800  
MANHATTAN, NY 6467800411  
MT LAUREL, NJ 6098572999  
WARREN, NJ 9086600999



1165R Massachusetts Avenue

Ch. 40B ZBA Submission

### Section 3.2.3 Funding Evidence & Subsidizing Agency

Anticipated Construction Financing:      NEF

Name of Bank:                              Rockland Trust Bank

Please see the enclosed Letter of Interest from Rockland Trust, dated June 26, 2020.



June 26, 2020

Mr. Daniel J. St. Clair  
Managing Director  
Spaulding & Slye Investments  
One Post Office Square, 28th Floor  
Boston, MA 02109

**Re: NEF Lender Letter of Interest**  
**The Project/Development - the redevelopment of 1165R Massachusetts Avenue, Arlington, MA**  
**The Developer – Spaulding & Slye Investments**

Dear Daniel:

Per your request, this letter is to confirm that Rockland Trust Company having a place of business at 288 Union Street, MA 02370 is a member of the Federal Home Loan Bank of Boston. Thank you for giving Rockland Trust Company the opportunity to support the housing and community development initiative that will benefit affordable housing needs. Rockland Trust Company is interested in providing financing options and shall use advances from the Federal Home Loan Bank of Boston's New England Fund for the above referenced project in connection with Massachusetts Housing Finance Agency (Mass Housing), acting as Subsidizing Agency, pursuant to Massachusetts General Laws Chapter 40B, §§20-23, 760 CMR 56.00 and the Comprehensive Permit Guidelines issued by the Department of Housing and Community Development.

This Letter of Interest is based on the following information and understanding:

The proposed development project will consist of approximately 130 apartment units, 130 parking spaces, and approximately 8,000 square feet of amenity space located at 1165R Massachusetts Avenue, Arlington, MA;

The Project will be subject to approvals of Town of Arlington, Mass Housing, Arlington Conservation Commission, Arlington Historical Commission, Massachusetts Historical Commission and other approvals. The Project will be constructed in accordance with the terms of a comprehensive permit issued by the Arlington Zoning Board of Appeals in accordance with the Act and the Comprehensive Permit Rules;

The Comprehensive Permit Guidelines require that certain minimum funding requirements related to financing provided through the New England Fund (NEF) be satisfied in order to meet the subsidy requirements of the Act;

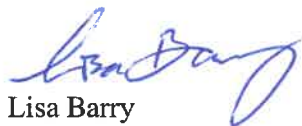
The Regulatory Agreement to be entered into by the Developer and Mass Housing will require that the Developer shall provide to the Subsidizing Agency a certification from the NEF Lender concerning compliance with such minimum subsidy requirements; and

A certification letter from the NEF Lender will be required prior to Mass Housing issuing its Final Approval for the Development and entering into the Regulatory Agreement as provided in the Comprehensive Permit Rules.



Thank you for the opportunity.

Sincerely,

A handwritten signature in blue ink, appearing to read "Lisa Barry", with a stylized, cursive script.

Lisa Barry  
Vice President



### Section 3.2.2 Limited Dividend Organization

Name of Proposed Development Entity: 1165R Mass MA Property, LLC

Entity Type:	Limited Dividend Organization*
State where Entity was Formed:	Delaware
Entity Primary Contact Information:	Daniel St. Clair Project Executive Spaulding & Slye Investments One Office Square, Floor 26 Boston, MA 02109 T. (617) 531-4244 Email: <a href="mailto:daniel.stclair@ssinvests.com">daniel.stclair@ssinvests.com</a>
Secondary Contact Information:	Julia Mirak Kew Property Owner 438 Massachusetts Avenue, Suite 127 Arlington, MA 02474 T. (781) 641-6536

**\*Note:**

1. See the fourth page of Attachment 1, Item (f), in MassHousing's Project Eligibility Letter, dated November 17, 2020.



1165R Massachusetts Avenue  
Ch. 40B ZBA Submission

### Section 3.2.1 Project Eligibility Letter

Please see the enclosed Project Eligibility Letter provided by MassHousing, dated November 17, 2020.





Massachusetts Housing Finance Agency  
One Beacon Street, Boston, MA 02108

TEL: 617.854.1000  
FAX: 617.854.1091 | www.masshousing.com  
Videophone: 857.366.4157 or Relay: 711

November 17, 2020

Daniel St. Clair  
Spaulding & Slye Investments  
One Post Office Square, Floor 26  
Boston, MA 02109

**RE: 1165R Mass Ave, Arlington, MA  
Project Eligibility/Site Approval  
MH ID No. 1088**

Dear Mr. St. Clair:

This letter is in response to the application for a determination of Project Eligibility (Site Approval) pursuant to Massachusetts General Laws Chapter 40B ("Chapter 40B"), 760 CMR 56.00 (the "Regulations") and the Comprehensive Permit Guidelines issued by the Department of Housing and Community Development ("DHCD") (the "Guidelines" and, collectively with Chapter 40B and the Regulations, the "Comprehensive Permit Rules"), under the New England Fund ("NEF") Program ("the Program") of the Federal Home Loan Bank of Boston ("FHLBank Boston").

1165 R Mass MA Property, LLC (the "Applicant") submitted an Application to MassHousing pursuant to Chapter 40B. The Applicant proposed to build 130 units of rental housing, including 33 affordable, on approximately 2 acres of land located at 1165R Massachusetts Avenue (the "Site") in Arlington, MA (the "Municipality").

MassHousing has performed an on-site inspection of the Site and has reviewed the pertinent information for the Project submitted by the Applicant, the Municipality and others in accordance with the Comprehensive Permit Rules.

In accordance with the Comprehensive Permit Rules, this letter is intended to be a written determination of Project Eligibility ("Site Approval") by MassHousing acting as Subsidizing Agency under the Guidelines, including Part V thereof, "Housing Programs In Which Funding Is Provided By Other Than A State Agency."



### **Municipal Comments**

Pursuant to the Regulations, the Municipality was given a thirty (30) day period in which to review the Site Approval Application and submit comments to MassHousing. At the request of the Municipality, this period was extended for a total of sixty (60) days. Subsequently, the Municipality submitted a letter of support for the Project, specifically noting the Applicant's cooperation with the Town and the proposal's overall consistency with the Arlington Master Plan. The Municipality notes its appreciation for the Applicant's proposal to increase the amount of open space on the Site, preserve historic buildings, and create a public point of access to the Mill Brook. Further, the Municipality calls attention to the Site's direct proximity to public transportation. The Municipality also identified the following concerns and/or suggestions:

- The Municipality states that while the proposal focuses on providing market-rate and moderate-income units targeting residents at 80% AMI, the Town of Arlington hopes to incorporate diverse housing for extremely low- to middle-income households, to address local need.
- The Municipality has concerns about the impact of increased traffic on municipal roadways.
- The Municipality notes that most of the jurisdictional environmental resource areas within the site are the 100-foot Wetlands Buffer, the Adjacent Upland Resource Area, and the 200-foot Riverfront Area.
- The Municipality encourages the Applicant to include as much greening of the area as is possible, particularly along the adjacent resource areas.

### **Comments Outside of the Findings**

While Comprehensive Permit Rules require MassHousing, acting as Subsidizing Agency under the Guidelines, to "accept written comments from Local Boards and other interested parties" and to "consider any such comments prior to issuing a determination of Project Eligibility," they also limit MassHousing to specific findings outlined in 760 CMR 56.04(1) and (4). The following comments submitted to MassHousing identified issues that are not within the scope of our review:

- The Municipality notes that community members are concerned about the anticipated loss of creative spaces for artists in the historic building that would be replaced. However, the Municipality acknowledges that the Applicant has committed to providing display space for local artists' works in common areas of the Project, consistent with the current practice at the adjacent coworking space and recognizes the proponent's long record of support for arts and culture in the Municipality.

### **MassHousing Determination and Recommendations Determination and Recommendations**

MassHousing staff has determined that the Project appears generally eligible under the requirements of the Program, subject to final review of eligibility and to Final Approval under the Comprehensive Permit Rules. As a result of our review, we have made the findings as required pursuant to 760 CMR 56.04(1) and (4). Each such finding, with supporting reasoning, is set forth in further detail on Attachment 1 hereto. It is important to note that Comprehensive Permit Rules limit MassHousing to



these specific findings in order to determine Project Eligibility. If, as here, MassHousing issues a determination of Project Eligibility, the Developer may apply to the Zoning Board of Appeals (“ZBA”) of the Municipality for a Comprehensive Permit. At that time, local boards, officials and members of the public are provided the opportunity to further review the Project to ensure compliance with applicable state and local standards and regulations.

Based on MassHousing’s consideration of comments received from the Municipality, and its site and design review, the following issues should be addressed in your application to the ZBA for a Comprehensive Permit and fully explored in the public hearing process prior to submission of your application for final approval under the Program:

- Development of this Site will require compliance with all state and federal environmental laws, regulations and standards applicable to existing conditions and to the proposed use related to building construction, stormwater management, wastewater collection and treatment, and hazardous waste safety. The Applicant should expect that the Municipality will require evidence of such compliance prior to the issuance of a building permit for the Project.
- The Applicant should be prepared to provide sufficient data to assess potential traffic impacts on area roadways and intersections, including the safety of proposed site access and egress, and to respond to reasonable requests for mitigation.
- The Applicant is encouraged to explore ways to enhance vegetative buffers along the adjacent resource areas.

MassHousing has also reviewed the application for compliance within the requirements of 760 CMR 56.04(2) relative to Application requirements and has determined that the material provided by the Applicant is sufficient to show compliance.

This Site Approval is expressly limited to the development of no more than one hundred and thirty (130) rental units under the terms of the Program, of which not less than thirty-three (33) of such units shall be restricted as affordable for low or moderate-income persons or families as required under the terms of the Guidelines. It is not a commitment or guarantee of financing and does not constitute a site plan or building design approval. Should you consider, prior to obtaining a Comprehensive Permit, the use of any other housing subsidy program, the construction of additional units or a reduction in the size of the Site, you may be required to submit a new Site Approval application for review by MassHousing. Should you consider a change in tenure type or a change in building type or height, you may be required to submit a new site approval application for review by MassHousing.

For guidance on the Comprehensive Permit review process, you are advised to consult the Guidelines. Further, we urge you to review carefully with legal counsel the M.G.L. c.40B Comprehensive Permit Regulations at 760 CMR 56.00.

This approval will be effective for a period of two (2) years from the date of this letter. Should the Applicant not apply for a Comprehensive Permit within this period this letter shall be considered to be



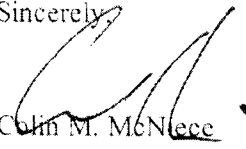
expired and no longer in effect unless MassHousing extends the effective period of this letter in writing. In addition, the Applicant is required to notify MassHousing at the following times throughout the two-year period: (1) when the Applicant applies to the local ZBA for a Comprehensive Permit. (2) when the ZBA issues a decision and (3) if applicable, when any appeals are filed.

Should a Comprehensive Permit be issued, please note that prior to (i) commencement of construction of the Project or (ii) issuance of a building permit, the Applicant is required to submit to MassHousing a request for Final Approval of the Project (as it may have been amended) in accordance with the Comprehensive Permit Rules (see especially 760 CMR 56.04(07) and the Guidelines including, without limitation, Part III thereof concerning Affirmative Fair Housing Marketing and Resident Selection). Final Approval will not be issued unless MassHousing is able to make the same findings at the time of issuing Final Approval as required at Site Approval.

Please note that MassHousing may not issue Final Approval if the Comprehensive Permit contains any conditions that are inconsistent with the regulatory requirements of the New England Fund Program of the FHLBank Boston, for which MassHousing serves as Subsidizing Agency, as reflected in the applicable regulatory documents. In the interest of providing for an efficient review process and in order to avoid the potential lapse of certain appeal rights, the Applicant may wish to submit a "final draft" of the Comprehensive Permit to MassHousing for review. Applicants who avail themselves of this opportunity may avoid significant procedural delays that can result from the need to seek modification of the Comprehensive Permit after its initial issuance.

If you have any questions concerning this letter, please contact Jessica Malcolm at (617) 854-1201.

Sincerely,



Colin M. McNiece  
General Counsel

cc: Jennifer Maddox, Undersecretary, DHCD  
The Honorable Cindy F. Friedman  
The Honorable Sean Garballey  
John Hurd, Chair, Select Board  
Christian Klein, Chair, Board of Appeals



## **Attachment 1**

### **760 CMR 56.04 Project Eligibility: Other Responsibilities of Subsidizing Agency Section (4) Findings and Determinations**

**1165R Massachusetts Avenue, MA #10  
MH ID #1088**

MassHousing hereby makes the following findings, based upon its review of the application, and taking into account information received during the site visit and from written comments:

***(a) that the proposed Project appears generally eligible under the requirements of the housing subsidy program, subject to final approval under 760 CMR 56.04(7);***

The Project is eligible under the NEF housing subsidy program and at least 25% of the units will be available to households earning at or below 80% of the Area Median Income (AMI), adjusted for household size, as published by the U.S. Department of Housing and Urban Development ("HUD"). The most recent HUD income limits indicate that 80% of the current median income for a four-person household in Arlington is \$96,250.

A letter expressing interest for Project financing was provided by Rockland Trust, a member bank of the FHLBank Boston.

***(b) that the site of the proposed Project is generally appropriate for residential development, taking into consideration information provided by the Municipality or other parties regarding municipal actions previously taken to meet affordable housing needs, such as inclusionary zoning, multifamily districts adopted under c.40A, and overlay districts adopted under c.40R, (such finding, with supporting reasoning, to be set forth in reasonable detail);***

Based on a site inspection by MassHousing staff, internal discussions, and a thorough review of the application, MassHousing finds that the Site is suitable for residential use and development and that such use would be compatible with surrounding uses and would address the local need for housing.

The Town of Arlington does have a DHCD-approved Housing Production Plan. According to DHCD's Chapter 40B Subsidized Housing Inventory (SHI), updated through September 2020, Arlington has 1,122 Subsidized Housing Inventory (SHI) units (5.64% of its housing inventory), which is 866 units short of the statutory minima of 10%.

***(c) that the conceptual project design is generally appropriate for the site on which it is located, taking into consideration factors that may include proposed use, conceptual site plan and building massing, topography, environmental resources, and integration into existing development patterns (such finding, with supporting reasoning, to be set forth in reasonable detail);***



**Relationship to Adjacent Building Typology (including building massing, site arrangement, and architectural details):**

The Project proposal consists of 130 rental units in four (4) buildings. Building #1 is an existing 4-story, mill building which will be adapted to 4 levels of residential units. Building #2 is new construction and includes 4 floors of residential units above 1 level of parking. Building #3 is an existing single-story building which will be adapted to amenity space. Building #4 is new construction and will include 4 levels of residential units and 2 floors of parking. There are a few examples of multi-story buildings in the area and the proposed buildings will be larger in mass and height than surrounding structures. The proposed design uses the sloping site, building siting and architectural language to reduce the scale and mass of the building and create a transition from the surrounding typologies. The largest residential building (6-story) is sited at the rear of the property behind the existing buildings.

Material choices attempt to balance the existing historic buildings with the new construction as well as reduce the massing of the buildings and include various applications of fiber cement paneling and siding and metal railings. Large 4-over-4 double hung windows mimic the windows at the existing buildings. The color contrast of the upper floor helps reduce the perceived height of the building. Larger retail style glazing defines the site facing lower levels and screens conceal the parking levels. Landscaping and site lighting can be used to incorporate the pedestrian scale. The architectural style of the proposed buildings fits within the context of the surrounding historic buildings. Further study will be required to articulate the design approach and evaluate its success.

**Relationship to adjacent streets/Integration into existing development patterns**

Neighboring building typologies include a mix of residential development as well as low-rise commercial developments, with large areas dedicated to surface parking. The Project's relationship to adjacent properties, rights of way, and existing development patterns largely reflects existing conditions with respect to the connecting roads. The Site is in close proximity to public transportation and is within walking distance to amenities such as shopping, government offices, schools, work, a bike trail, and places of worship. The Minuteman Commuter Bikeway runs adjacent to the site. The proposal boasts a walkable/bikeable "greenway" along the Mill Brook Conduit, known as the Mill Brook Linear Park, which includes pedestrian access between four municipally owned recreational and conservation areas along Mill Brook.

**Density**

The Developer intends to construct 130 units on approximately 2.05 acres, 1.79 acres of which are buildable. The resulting density is 72.6 units per buildable acre, which is acceptable given the proposed housing type and the Project's location within an existing mixed-use and transit-oriented neighborhood.

**Conceptual Site Plan**

The Site is located off Massachusetts Avenue and will be adapted from a mostly paved, industrial use site to a pedestrian-friendly residential area, featuring a walkway along the historic Mill Brook



Conduit. The Project includes a combination of the rehabilitation (adaptive reuse) of two existing historic buildings and the construction of two new residential buildings, above parking. The footprints of the buildings provide for long corridors and a hierarchy of outdoor spaces. The Project will contain 135 parking spaces. Vehicular and pedestrian access is provided from both Massachusetts Avenue and Forrest Street, meeting at the interior of the Site at the lobby area and providing access to the residential buildings, structured parking levels and some additional surface parking spaces. A total of 135 parking spaces is proposed. The proposal includes the creation of a walkable and bike-able “greenway” along the Mill Brook Conduit.

### **Topography**

The Site slopes downward to the North toward the Mill Brook Conduit. The topographic features of the Site have been considered in relationship to the proposed Project plans and do not constitute an impediment to development of the Site.

### **Environmental Resources**

According to the FIRM map, a portion of the site (approximately 3%) is categorized as wetlands and a portion of the site (approximately 9%) is located within Zone AE (subject to inundation by the 1% annual chance flood event) and a regulatory floodway. Evidence of compliance with all state and federal environmental laws, regulations, and standards applicable to existing conditions and to the proposed use related to wetland protection and floodplain management is required.

***(d) that the proposed Project appears financially feasible within the housing market in which it will be situated (based on comparable rentals or sales figures);***

The 33 affordable units will have rent levels of \$1,487 for the 8 studios, \$1,543 for the 14, one-bedroom units, \$1,824 for the 8 two-bedroom units, and \$2,073 for the 3 three-bedroom units, less assumed utility costs of \$198, \$262, \$342, and \$429, respectively. MassHousing’s Appraisal and Marketing Division (A&M) has reviewed proposed affordable rents and report that they are within current affordable rent levels for the Boston-Cambridge-Quincy HMFA under the NEF Program.

MassHousing’s Appraisal and Marketing team performed a Competitive Market Analysis and found that proposed market rents for each unit type fall within the range of adjusted comparable market rents.

***(e) that an initial pro forma has been reviewed, including a land valuation determination consistent with the Department’s Guidelines, and the Project appears financially feasible and consistent with the Department’s Guidelines for Cost Examination and Limitations on Profits and Distributions (if applicable) on the basis of estimated development costs;***

MassHousing has commissioned an “As-Is” appraisal which indicates a land valuation of \$3,980,000. Based on a proposed investment of \$13,936,500.00 in equity the development pro forma appears to be financially feasible and within the limitations on profits and distributions.



***(f) that the Applicant is a public agency, a non-profit organization, or a Limited Dividend Organization, and it meets the general eligibility standards of the housing program; and***

The Applicant is eligible to become a Limited Dividend Organization. The Applicant meets the general eligibility standards of the NEF housing subsidy program and has executed an Acknowledgment of Obligations to restrict their profits in accordance with the applicable limited dividend provisions.

***(g) that the Applicant controls the site, based on evidence that the Applicant or a related entity owns the site, or holds an option or contract to acquire such interest in the site, or has such other interest in the site as is deemed by the Subsidizing Agency to be sufficient to control the site.***

The Applicant controls the entire Site through a joint venture agreement with Arlington Center Garage Service Corp. by virtue of the following Deeds:

William Gladstone, receiver of the Schwamb Corporation to Arlington Center Garage and Service Corp. dated December 5, 1972 and recorded with the Southern Middlesex Registry of Deeds in Book 12342 Page 661;

William Gladstone, receiver of the Schwamb Corporation to Arlington Center Garage and Service Corp. dated December 5, 1972 and recorded with the Southern Middlesex Registry of Deeds in Book 12785 Page 422;

Yukon Realty Associates to Arlington Center Garage and Service Corp. dated April 25, 1975 and recorded with the Southern Middlesex Registry of Deeds in Book 72212 Page 544.



### Section 3.2.6 Report on Existing Conditions

The following is description of the existing conditions at the 1165R Massachusetts Avenue site and in the surrounding areas:

#### ***Existing Site Conditions – Location, Zoning, Use, & Lot Coverage***

The subject site, located at 1165 – 1167, and 1165R Massachusetts Avenue is approximately 2.3 acres in its current configuration. This includes a portion of the site on which 1167 Massachusetts Avenue (also known as “Workbar”) is located. The site will be subdivided to separate Workbar from the remainder of the property, resulting in a total development area of 2.05 acres at 1165R Massachusetts Avenue.

The site is located solely within the Industrial (I) Zoning District (Figure 1) and is bounded on the north by Mirak Chevrolet’s parking lot (1125 Massachusetts Avenue) and Lalicata Landscaping’s yard (33 Ryder Street). To the south, the site is bounded by the Mirak Hyundai car dealership (1165 Massachusetts Avenue) and on the east side by Mirak Chevrolet’s parking lot and Arlington Auto Detailing (1155R Massachusetts Avenue). On the west side of the site is the Robert J. Annese Law Office (1171 Massachusetts Avenue) and a condominium complex (9 Ryder Street).

The property includes a portion of the Mill Brook, running west to east, and was occupied from the 1870s into the 1970s by the Theodore Schwamb Company, which manufactured piano cases until the late 1920s and then architectural millwork. The property also contains Workbar, located at 1167 Massachusetts Avenue, which opened in 2015 and expanded in 2019.

The site is mostly paved for parking and occupied by buildings, with very little green space. The paved area accounts for 67.9% of the site and the building footprints make up 25.7% for a total impervious area of 93.6% (Figure 2). Buildings are located to the north and south of the Mill Brook Conduit and mainly on the east side of the site, as shown in Figure 2.

#### ***Buildings & Bridges***

The buildings to the north of the Mill Brook are 1 to 4-story brick and timber-framed structures and a 1-story, conventionally framed wood structure that is used as a garage (noted as Bldgs. 1, 3, Infill/Garage, and Drying Sheds in Figure 3). The building to the south of Mill Brook (noted as Bldg. 2 in Figure 3) is a 3-story, timber-framed building clad with aluminum siding.

A hazardous materials survey was prepared by Axiom Partners, Inc. in December 2019 and updated in March 2020. The report indicates the presence of asbestos-containing flooring, glazing compounds, asphaltic coatings on brick walls and ceilings, sealants, tar paper behind aluminum siding, paper beneath flooring, caulking, insulation materials, mastics, asphaltic roofing materials, and perimeter flashing/sealants. Please refer to Figure 3 for a list of hazardous materials found in each of the buildings.

Currently, Buildings 1 and 2 are connected via an enclosed multi-story passageway that spans the Mill Brook. Building 2 is connected to Workbar via an enclosed overhead corridor. Buildings 1, 3, the Infill/Garage, and Drying Sheds are also connected all at the ground floor level. There also exists loading docks servicing Building 2 that are constructed over the Mill Brook.

Three bridges exist on site crossing the Mill Brook Conduit. The first is located at the intersection of the site access drive and Ryder Street. The second is located at the rear of Workbar that provides access to the basement. The third and most often used bridge is located between Workbar and Building 2 and



### Section 3.2.6 Report on Existing Conditions

connects the site access driveway off of Massachusetts Avenue to the north side of the site. (See Figure 3.)

#### ***Wetlands & Trees***

Wetland boundaries are defined in an ALTA Survey, prepared by Control Point Associates, Inc. (Figure 4). They exist along the Mill Brook Conduit and the Ryder Brook drainage ditch on the north side of the site. There are no vernal pools. Flood Zones are also indicated in Figure 4. The majority of the site is within Flood Hazard Zone X, which are areas determined to be outside the 0.2% annual chance flood plain.

Mature trees (8 inches or greater in caliper) exist mainly near the Mill Brook Conduit. At that location, there are (5) Norway Maples and (1) Black Cherry. With the exception of the Cherry, these trees are growing in the Mill Brook Conduit wall, posing a threat to the integrity of the wall itself. There are also (2) 10" Mulberry Trees in the Ryder Brook drainage ditch. (See Figure 5.). All of the existing species are invasive and not on the list of protected tree types.

#### ***Traffic Patterns***

Nitsch Engineering was retained to study the existing traffic patterns in and around the site. Existing patterns are as follows:

**Massachusetts Avenue:** 2-lane (two-way) roadway running east-west by the site, under the jurisdiction of the Town of Arlington. Traffic runs in both directions and includes cars, buses, heavy vehicles, pedestrians, and bicycles.

**Forest Street:** 2-way roadway running north-south, under the jurisdiction of the Town of Arlington. Forest Street terminates at Summer Street to the north and Massachusetts Avenue to the south. Traffic includes pedestrians, bicycles, and vehicles.

**Ryder Street:** 2-way private road, partially owned by the 1165R development (from the site access drive to Forest Street (Figure 4)). Ryder Street runs northeast-southwest and terminates at the Minuteman Commuter Bikeway to the north and at Forest Street to the southwest. Traffic includes pedestrians, bicycles, and vehicles, and medium to large trucks.

**Quinn Access Road:** 2-way private road, running parallel to Massachusetts Avenue. This access road connects the site to Quinn Road farther to the southeast. Traffic includes mostly vehicles and medium to large trucks.

**Quinn Road:** 2-way private road, running north-south behind the Mirak Hyundai dealership and connected to the site via the Quinn Access Road. Traffic includes mostly vehicles and pedestrians.

**Access Drive off of Massachusetts Avenue:** 2-way private road, running north-south and connecting Massachusetts Avenue with the Robert J. Annese parking lot, the Mirak Chevrolet dealership lot, Workbar, the Quinn Access Road, the bridge leading to the north side of the development site. Traffic includes vehicles, medium-sized trucks, and pedestrians.

#### ***Site Utilities***

The property is served by all of the major utility companies. Eversource provides electricity, National Grid provides natural gas, and Verizon, Comcast, and RCN all provide telecommunications services. Electricity is brought to the site off of Massachusetts Avenue via overhead wires and utility poles. These



### Section 3.2.6 Report on Existing Conditions

wires also serve the adjacent businesses. Gas service is currently only on a small portion of the site serving only the Mirak Hyundai dealership. Workbar and other buildings on the development site are fueled by oil, solar, and geothermal wells (Workbar only). Solar panels exist on the roofs of Workbar, Building 1, and Building 2.

#### ***Character of Neighborhood Open Areas & Summary of Conditions Surrounding the Site***

Open areas in the neighborhood include the Summer Street Field (0.2 miles from the site), the Arlington Recreation Department (0.12 miles from the site), Hill's Hill (0.15 miles from the site), and the Minuteman Commuter Bikeway (0.8 miles from the site).

The Summer Street Field includes a baseball diamond, basketball court, and walking paths, and other recreational facilities. The Arlington Recreation Department provides a wide variety of programs and child care services to members of all ages and features the Ed Burns Skating Rink as well as an outdoor playground for younger children, a baseball diamond, and a soccer field for the Arlington Soccer Club and others.

Directly adjacent and accessible from the Recreational Department site is Hill's Hill park which provides residents access to a number of walking trails in a bucolic setting.

Finally, The Minuteman Commuter Bikeway is a 10-mile long paved recreation and bicycle commuting path that passes through Arlington and Lexington and connects Alewife Station in West Cambridge, MA to South Road in Bedford, MA.

The larger community surrounding the site is densely populated with well-maintained, single and multi-family dwellings and commercial buildings. There is ample access to public transportation, businesses, schools, and places of worship along the Massachusetts Avenue corridor, in addition to the recreational facilities noted above.

Arlington Town Center is also within walking and biking distance from the neighborhood.

Photographs of the site and greater neighborhood are included on the following pages.



## Section 3.2.6 Report on Existing Conditions

END of SECTION

### *Photos of Surrounding Streets and Site Context*



*View of Site from Massachusetts Avenue*



*Access Drive off of Mass Ave, looking north.*



*Neighboring Businesses*



*Workbar, 1167 Massachusetts Avenue*



*Building 2 and connector to Workbar*



Section 3.2.6 Report on Existing Conditions



*Building 2 and neighboring business*



*Mirak Hyundai Dealership*



*Building 2 Closeup*



*View east down Quinn Road access drive*



Section 3.2.6 Report on Existing Conditions



*Overhead connector between Workbar and Building 2*



*View north from bridge between Workbar & Building 2 (Bldg 1 in background)*



*View from site looking north toward Minuteman Bikeway*



*View from site looking south toward Workbar & Building 2*



Section 3.2.6 Report on Existing Conditions



*View from site looking east*



*View from site looking west; Lalicata Landscaping in background*



*View of Building 1 with Loading Dock*



*Rear of Workbar*



Section 3.2.6 Report on Existing Conditions



*Rear of Building 2 garage/loading dock spanning Mill Brook*



*View of site from bridge looking northwest*

END of PHOTOGRAPHS



## 3.2.6 Report on Existing Site Conditions

FIGURE 1

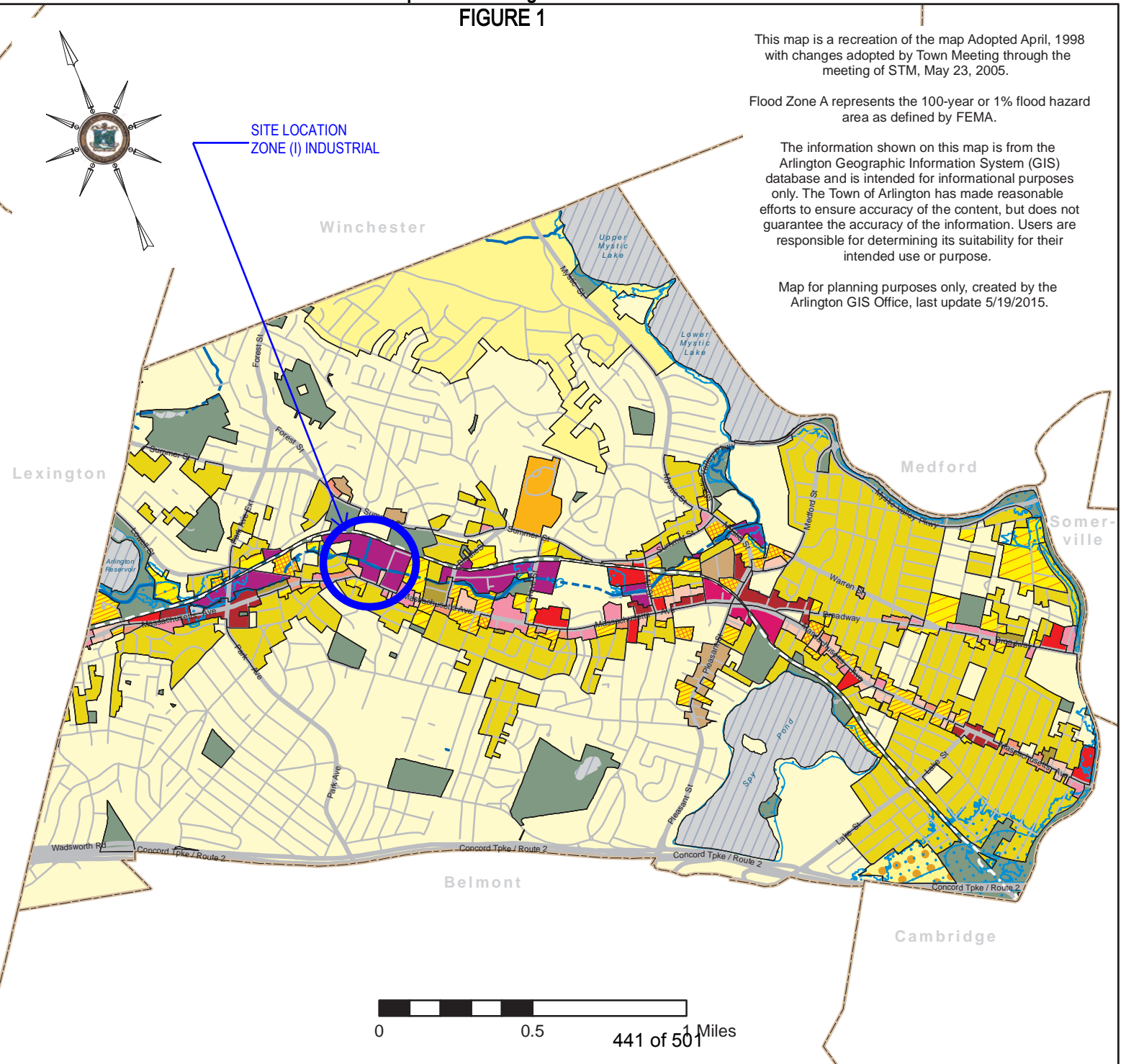
# Zoning Map of the Town of Arlington, MA

## LEGEND

### Zoning Districts

- B1: Neighborhood Office
- B2: Neighborhood Business
- B2A: Major Business
- B3: Village Business
- B4: Vehicular Oriented Business
- B5: Central Business
- I: Industrial
- MU: Multi-Use
- OS: Open Space
- PUD: Planned Unit Development
- R0: Large Lot Single Family
- R1: Single Family
- R2: Two Family
- R3: Three Family
- R4: Town House
- R5: Apartments Low Density
- R6: Apartments Med Density
- R7: Apartments High Density
- T: Transportation
- Flood Zone A (FEMA)
- Water Body
- Brook / Stream (surface)
- Brook / Stream (subsurface)
- Town Boundary
- Minuteman Bikeway

For a more detailed map, visit the  
Town of Arlington website:  
[www.arlingtonma.gov/maps](http://www.arlingtonma.gov/maps)  
Poster sized maps are available  
at Town Hall.



This map is a recreation of the map Adopted April, 1998 with changes adopted by Town Meeting through the meeting of STM, May 23, 2005.

Flood Zone A represents the 100-year or 1% flood hazard area as defined by FEMA.

The information shown on this map is from the Arlington Geographic Information System (GIS) database and is intended for informational purposes only. The Town of Arlington has made reasonable efforts to ensure accuracy of the content, but does not guarantee the accuracy of the information. Users are responsible for determining its suitability for their intended use or purpose.

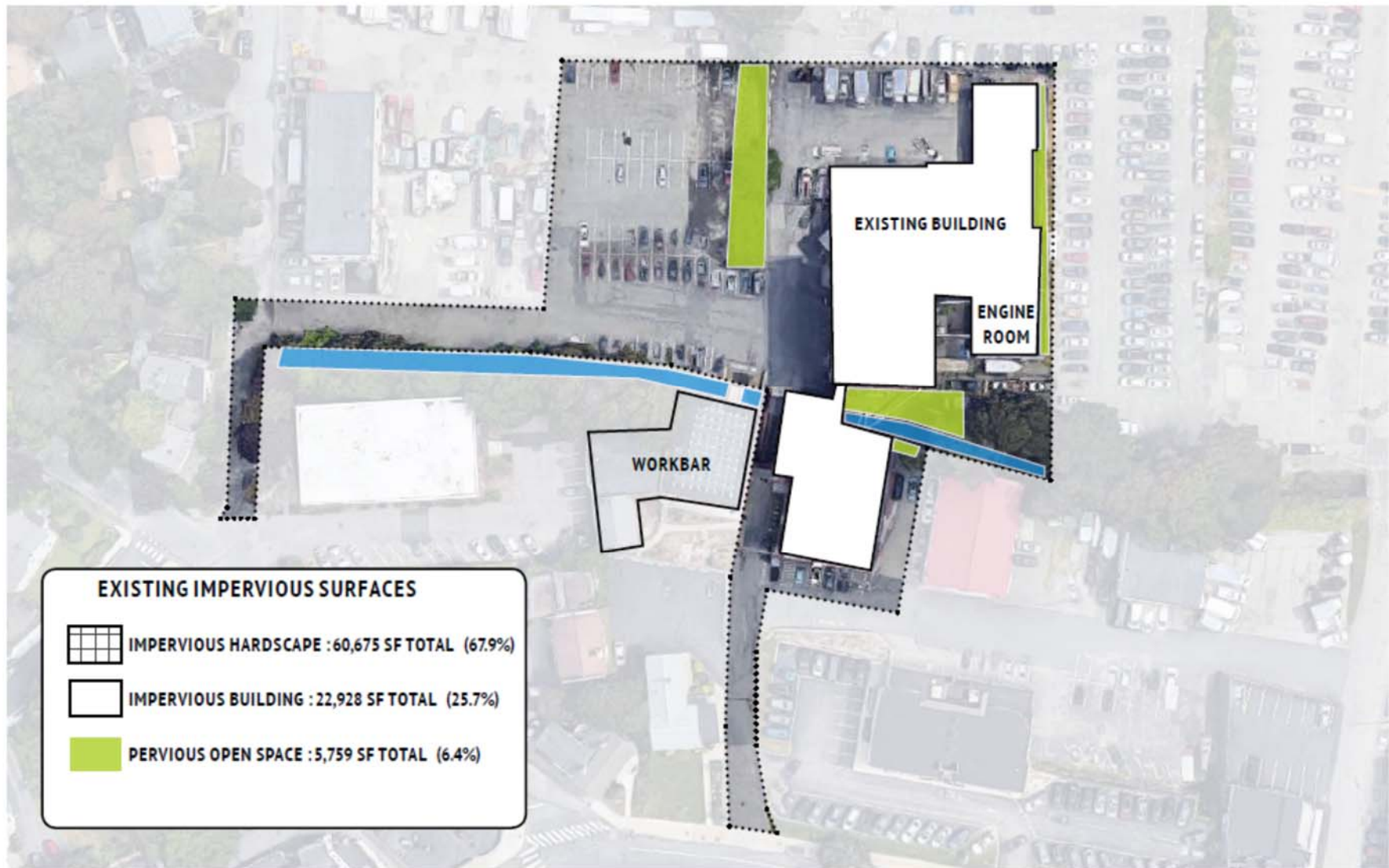
Map for planning purposes only, created by the Arlington GIS Office, last update 5/19/2015.

0 0.5 1 Miles  
441 of 501



3.2.6 Report on Existing Site Conditions  
FIGURE 2

## IMPERVIOUS SURFACES Existing



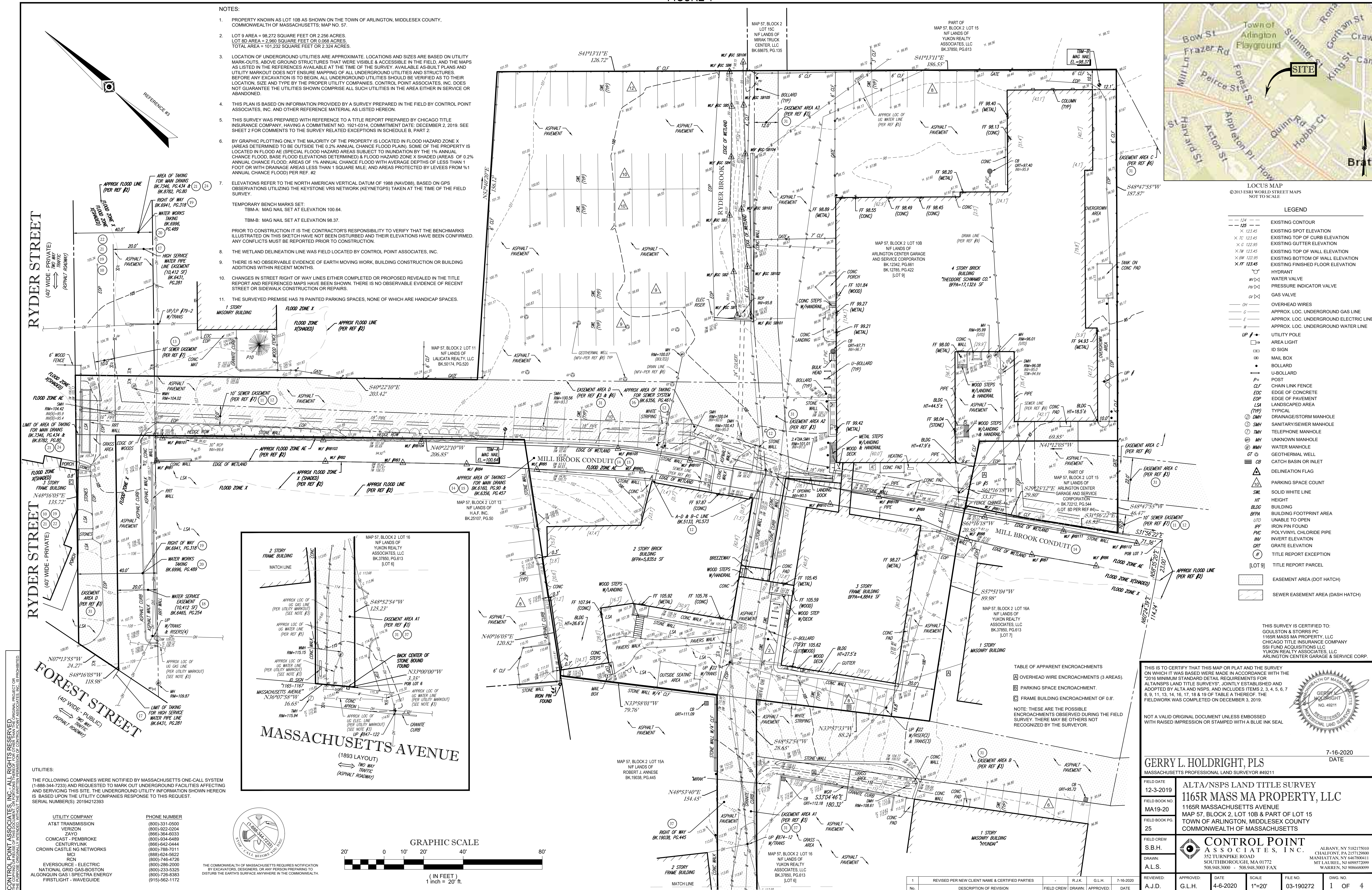


3.2.6 Report on Existing Site Conditions  
FIGURE 3





3.2.6 Report on Existing Site Conditions  
FIGURE 4





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RYDER STREET  
(40' WIDE - PRIVATE)

FOREST STREET  
(40' WIDE - PUBLIC)

MAP 57, BLOCK 2, LOT 11  
N/F LANDS OF  
LALICATA REALTY, LLC  
BK.50174, PG.520

MAP 57, BLOCK 2, LOT 13  
N/F LANDS OF  
H.A.F. INC.  
BK.25107, PG.50

MAP 57, BLOCK 2, LOT 15A  
N/F LANDS OF  
ROBERT J. ANNESE  
BK.19038, PG.445

MAP 57, BLOCK 2, LOT 16  
N/F LANDS OF  
YUKON REALTY  
ASSOCIATES, LLC  
BK.37850, PG.613  
[LOT 6]

MAP 57, BLOCK 2, LOT 108  
N/F LANDS OF  
ARLINGTON CENTER GARAGE  
AND SERVICE CORPORATION  
BK.12342, PG.661  
BK.12785, PG.422  
[LOT 9]

MAP 57, BLOCK 2  
LOT 15C  
N/F LANDS OF  
MIRAK TRUCK  
CENTER, LLC  
BK.68675, PG.135

PART OF  
MAP 57, BLOCK 2, LOT 15  
N/F LANDS OF  
YUKON REALTY  
ASSOCIATES, LLC  
BK.37850, PG.613



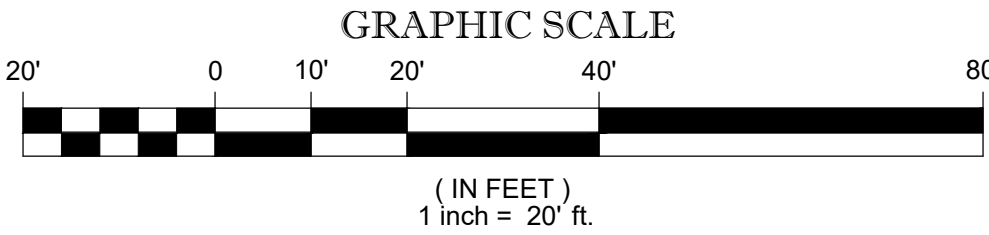
THIS SURVEY IS CERTIFIED TO:  
GOULSTON & STORRS PC  
1165R MASS MA PROPERTY, LLC  
CHICAGO TITLE INSURANCE COMPANY  
SSI FUND ACQUISITIONS, LLC  
YUKON REALTY ASSOCIATES, LLC  
ARLINGTON CENTER GARAGE & SERVICE CORP.

THIS IS TO CERTIFY THAT THIS MAP OR PLAT AND THE SURVEY  
ON WHICH IT WAS BASED WERE MADE IN ACCORDANCE WITH THE  
"2016 MINIMUM STANDARD DETAIL REQUIREMENTS FOR  
ALTA/NSPS LAND TITLE SURVEYS", JOINTLY ESTABLISHED AND  
ADOPTED BY ALTA AND NSPS, AND INCLUDES ITEMS 2, 3, 4, 5, 6, 7  
8, 9, 11, 13, 14, 16, 17, 18 & 19 OF TABLE A THEREOF. THE  
FIELDWORK WAS COMPLETED ON DECEMBER 3, 2019.

NOT A VALID ORIGINAL DOCUMENT UNLESS EMBOSSED  
WITH RAISED IMPRESSION OR STAMPED WITH A BLUE INK SEAL

GERRY L. HOLDRIGHT, PLS  
MASSACHUSETTS PROFESSIONAL LAND SURVEYOR #49211

7-16-2020  
DATE



1	REVISED PER NEW CLIENT NAME & CERTIFIED PARTIES	-	R.J.K.	G.L.H.	7-16-2020
No.	DESCRIPTION OF REVISION	FIELD CREW	DRAWN	APPROVED	DATE

FIELD DATE 12-3-2019	<b>ALTA/NSPS LAND TITLE SURVEY</b> <b>1165R MASS MA PROPERTY, LLC</b> 1165R MASSACHUSETTS AVENUE MAP 57, BLOCK 2, LOT 10B & PART OF LOT 15 TOWN OF ARLINGTON, MIDDLESEX COUNTY COMMONWEALTH OF MASSACHUSETTS
FIELD BOOK NO. MA19-20	
FIELD BOOK PG. 25	
FIELD CREW S.B.H.	

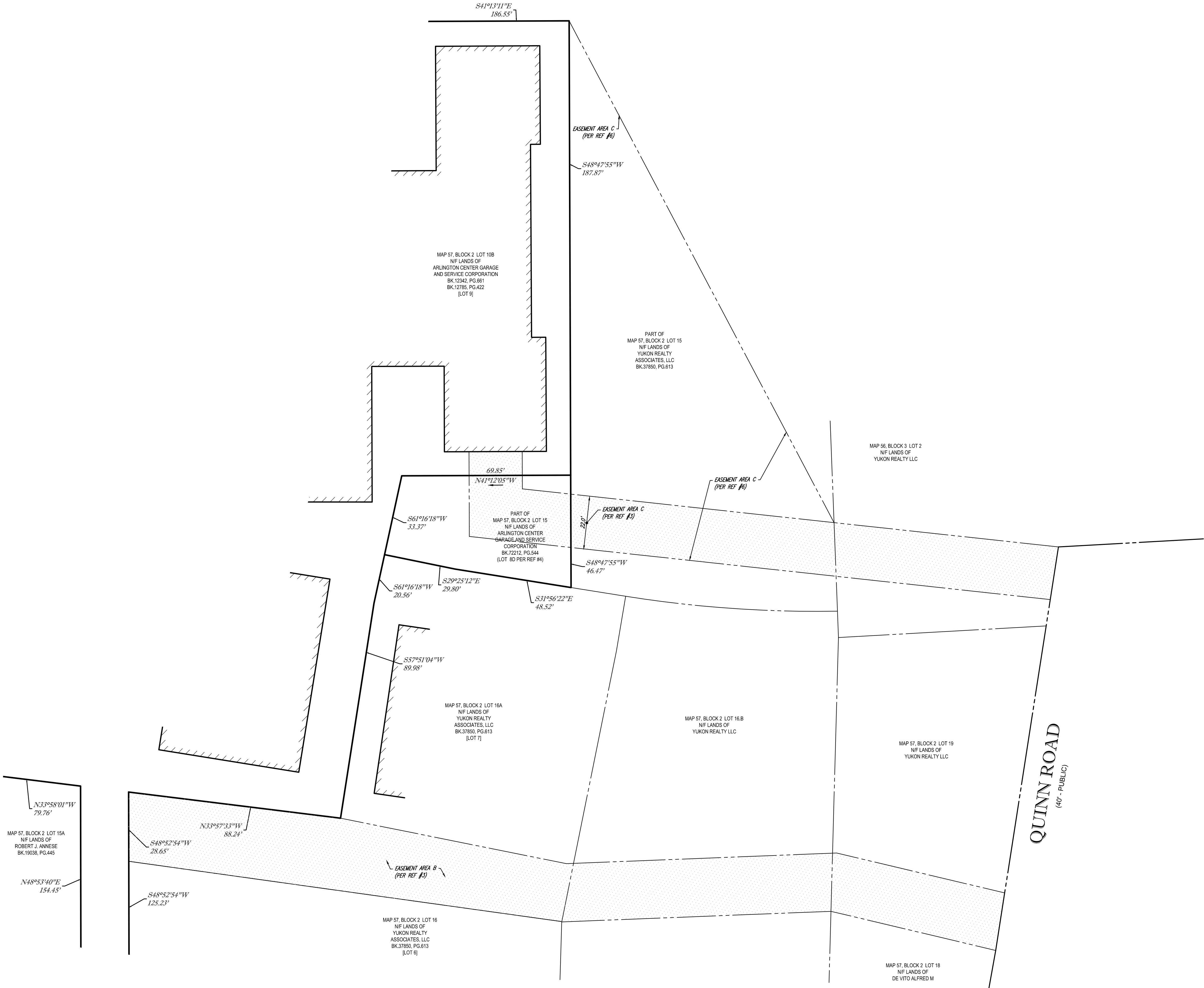
**CONTROL POINT ASSOCIATES, INC.**  
352 TURNPIKE ROAD  
SOUTH BOKROUGH, MA 01772  
508.948.3000 - 508.948.3003 FAX

ALBANY, NY 5183175010  
CHALFONT, PA 2157129800  
MANHATTAN, NY 6467800411  
MT LAUREL, NJ 6098572999  
WARREN, NJ 9086600599

DRAWN: A.L.S.	APPROVED: G.L.H.	DATE: 4-6-2020	SCALE: 1"=20'	FILE NO. 03-190272	DWG. NO. 2 OF 4
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THIS SURVEY IS CERTIFIED TO:  
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SSI FUND ACQUISITIONS LLC  
YUKON REALTY ASSOCIATES, LLC  
ARLINGTON CENTER GARAGE & SERVICE CORP.

THIS IS TO CERTIFY THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IT WAS BASED WERE MADE IN ACCORDANCE WITH THE "2016 MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTANSPS LAND TITLE SURVEYS", JOINTLY ESTABLISHED AND ADOPTED BY ALTA AND NSPS, AND INCLUDES ITEMS 2, 3, 4, 5, 6, 7, 8, 9, 11, 13, 14, 16, 17, 18 & 19 OF TABLE A THEREOF. THE FIELDWORK WAS COMPLETED ON DECEMBER 3, 2019.

NOT A VALID ORIGINAL DOCUMENT UNLESS EMBOSSED WITH RAISED IMPRESSION OR STAMPED WITH A BLUE INK SEAL.



7-16-2020  
DATE

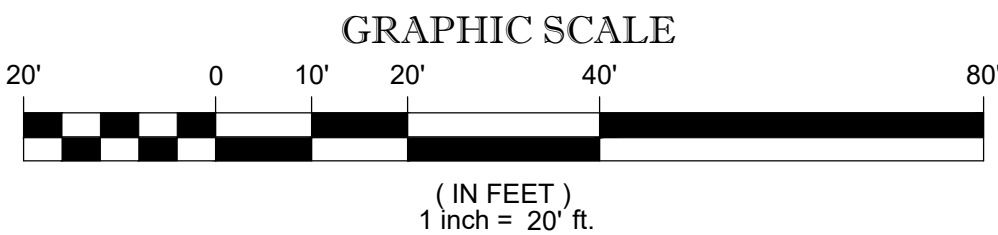
GERRY L. HOLDRIGHT, PLS  
MASSACHUSETTS PROFESSIONAL LAND SURVEYOR #49211

FIELD DATE: 12-3-2019  
FIELD BOOK NO.: MA19-20  
FIELD BOOK PG.: 25  
FIELD CREW: S.B.H.  
DRAWN: A.L.S.  
REVIEWED: A.J.D.  
APPROVED: G.L.H.  
DATE: 4-6-2020  
SCALE: 1"=20'  
FILE NO.: 03-190272  
DWG. NO.: 3 OF 4



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CHALFONT, PA 2157126900  
MANHATTAN, NY 6467800411  
MT LAUREL, NJ 6098572999  
WARREN, NJ 9086600999



1	REVISED PER NEW CLIENT NAME & CERTIFIED PARTIES	-	R.J.K.	G.L.H.	7-16-2020
No.	DESCRIPTION OF REVISION	FIELD CREW	DRAWN	APPROVED	DATE



THIS SURVEY WAS PREPARED WITH REFERENCE TO A TITLE REPORT PREPARED BY CHICAGO TITLE INSURANCE COMPANY, HAVING A COMMITMENT NO. 1921-0314, COMMITMENT DATE: DECEMBER 2, 2019, WHERE THE FOLLOWING SURVEY RELATED EXCEPTIONS APPEAR IN SCHEDULE B - SECTION 2:

GENERAL EXCEPTIONS 1 THRU 6, 29, 30, 34, AND 35 ARE NOT SURVEY RELATED AND HAVE NOT BEEN COMMENTED ON AS A PART OF THIS SURVEY.

7 INTENTIONALLY DELETED.

8 INTENTIONALLY DELETED.

9 INTENTIONALLY DELETED.

10 RIGHTS OF OTHERS ENTITLED THERETO TO USE THE 40' RIGHT OF WAY (NOW KNOWN AS RYDER STREET) ENUMERATED IN DEED DATED JUNE 11, 1923 RECORDED IN BOOK 4624, PAGE 488. SEE PLAN IN PLAN BOOK 4624, END - **RYDER STREET IS SHOWN.**

11 ORDER OF TAKING BY THE METROPOLITAN DISTRICT COMMISSION DATED JULY 9, 1926 RECORDED IN BOOK 4993, PAGE 166 AS SHOWN ON SURVEY - **PLAN BOOK 376, PLAN 41 UNCLEAR, SEWER EASEMENT SHOWN PER REFERENCE #7.**

12 EASEMENT TO THE COMMONWEALTH OF MASSACHUSETTS THROUGH ITS METROPOLITAN DISTRICT COMMISSION DATED AUGUST 19, 1927 RECORDED IN BOOK 5133, PAGE 573 AS SHOWN ON SURVEY - **SEWER EASEMENT, A-D & B-C LINES SHOWN.**

13 TAKING BY THE TOWN OF ARLINGTON FOR A SEWER SYSTEM DATED JUNE 25, 1928 RECORDED IN BOOK 5249, PAGE 121 AS SHOWN ON SURVEY - RYDER STREET. -**10' WIDE SEWER EASEMENT SHOWN.**

14 TAKING BY THE TOWN OF ARLINGTON FOR MAIN DRAINS DATED OCTOBER 18, 1937 RECORDED IN BOOK 6160, PAGE 90 AS SHOWN ON SURVEY -**MILL BROOK CONDUIT SHOWN.**

15 TAKING BY THE TOWN OF ARLINGTON FOR MAIN DRAINS DATED DECEMBER 26, 1939 RECORDED IN BOOK 6356, PAGE 457 AS SHOWN ON SURVEY -**MILL BROOK CONDUIT SHOWN.**

16 TAKING BY THE TOWN OF ARLINGTON FOR A SEWER SYSTEM DATED DECEMBER 26, 1939 RECORDED IN BOOK 6356, PAGE 461 AS SHOWN ON SURVEY. -**APPROX AREA OF TAKING SHOWN.**

17 ORDER OF TAKING BY THE METROPOLITAN DISTRICT COMMISSION FOR A HIGH SERVICE PIPE LINE DATED SEPTEMBER 12, 1940 RECORDED IN BOOK 6431, PAGE 281 AS SHOWN ON SURVEY - RYDER STREET. -**LIMIT OF TAKING IN FOREST STREET SHOWN.**

18 EASEMENT TO THE COMMONWEALTH OF MASSACHUSETTS FOR WATER SERVICE DATED DECEMBER 10, 1940 RECORDED IN BOOK 6465, PAGE 254 AS SHOWN ON THE SURVEY - RYDER STREET. -**EASEMENT SHOWN.**

19 RIGHT OF WAY OVER 40' ROW (RYDER STREET) IN DEED DATED JANUARY 7, 1946 RECORDED IN BOOK 6941, PAGE 318. -**RYDER STREET SHOWN.**

20 TAKING BY THE TOWN OF ARLINGTON FOR WATER WORKS DATED JUNE 18, 1946 RECORDED IN BOOK 6996, PAGE 489 AS SHOWN ON SURVEY - RYDER STREET. -**AREA OF WATER WORKS TAKING SHOWN.**

21 ORDER OF TAKING BY THE TOWN OF ARLINGTON FOR MAIN DRAINS DATED OCTOBER 4, 1948 RECORDED IN BOOK 7346, PAGE 434 AS SHOWN ON SURVEY - RYDER STREET. -**AREA OF TAKING IN RYDER STREET SHOWN.**

22 RIGHT OF WAY GRANTED BY INSTRUMENT DATED MAY 13, 1951 RECORDED IN BOOK 7767, PAGE 408. (RYDER STREET) -**40' RIGHT OF WAY KNOWN AS RYDER STREET SHOWN.**

23 INTENTIONALLY DELETED.

24 ORDER OF TAKING BY THE TOWN OF ARLINGTON FOR MAIN DRAINS DATED JULY 30, 1956 RECORDED IN BOOK 8782, PAGE 80 AS SHOWN ON SURVEY - RYDER STREET. -**AREA OF TAKING IN RYDER STREET SHOWN.**

25 INTENTIONALLY DELETED.

26 INTENTIONALLY DELETED.

27 INTENTIONALLY DELETED.

28 INTENTIONALLY DELETED.

31 SUBJECT TO AND TOGETHER WITH THE RIGHTS AND EASEMENTS SET FORTH IN EASEMENT AGREEMENT DATED DECEMBER 31, 2002 RECORDED IN BOOK 37850, PAGE 624. -**EASEMENT AREAS A1, A2, A3, B, C & D SHOWN. EASEMENT AREAS C & D ARE EACH SHOWN HEREON DIFFERENTLY PER REFERENCES 3 & 6.**

32 INTENTIONALLY DELETED.

33 NOTICE OF LEASE NAMING ARLINGTON CENTER GARAGE AND SERVICE CORPORATION, LESSOR AND MIRAK CHEVROLET, INC., LESSEE DATED SEPTEMBER 26, 2007 RECORDED IN BOOK 50215, PAGE 176. -**LOCATION OF 15,375 SF LEASE AREA IS NOT DESCRIBED OTHER THAN BEING A PORTION OF LOT 9, NOT PLOTTABLE.**

36 INTENTIONALLY DELETED.

37 RIGHT OF WAY CONTAINED IN DEED DATED MAY 9, 1968 RECORDED IN BOOK 19038, PAGE 445 AS SHOWN ON THE SURVEY. **RIGHT OF WAY IS PART OF EASEMENT AREA A1, SHOWN.**

EXHIBIT A

LOT 9 (1165-1167 MASSACHUSETTS AVENUE)

THE LAND WITH THE BUILDINGS THEREON SITUATED ON THE NORTHEASTERLY SIDE OF MASSACHUSETTS AVENUE, ARLINGTON, MIDDLESEX COUNTY, MASSACHUSETTS, NOW KNOWN AS AND NUMBERED 1165 REAR MASSACHUSETTS AVENUE, BEING LOT 9 SHOWN ON A PLAN ENTITLED "PLAN OF LOTS AND EASEMENTS IN ARLINGTON, MA" DATED OCTOBER 23, 2006 BY RIM ENGINEERING CO., INC. AND RECORDED WITH THE MIDDLESEX SOUTH DISTRICT REGISTRY OF DEEDS AS PLAN 1072 OF 2007 AND BEING ALSO SHOWN ON PLAN 110 OF 2019. SAID LOT 9 CONTAINS 98,272 SQUARE FEET OF LAND ACCORDING TO SAID PLAN.

LOT 8D (REAR OF MASSACHUSETTS AVENUE)

THE LAND WITH THE IMPROVEMENTS THEREON SITUATED ON THE NORTHEASTERLY SIDE OF MASSACHUSETTS AVENUE, ARLINGTON, MIDDLESEX COUNTY, MASSACHUSETTS BEING LOT 8D ON A PLAN ENTITLED "PLAN OF LAND IN ARLINGTON, MA" DATED DECEMBER 28, 2018 BY RIM ENGINEERING CO., INC. RECORDED WITH THE MIDDLESEX SOUTH DISTRICT REGISTRY OF DEEDS AS PLAN 110 OF 2019. SAID LOT 8D CONTAINS 2,960 SQUARE FEET OF LAND ACCORDING TO SAID PLAN.

TOGETHER WITH THE RIGHT AND EASEMENT TO USE THAT PORTION OF RYDER STREET (40' WIDE) NOT INCLUDED IN LOT 9 FROM FOREST STREET TO THE SOUTHWESTERLY BOUNDARY OF LOT 9 FOR ALL PURPOSES FOR WHICH STREETS AND WAYS MAY BE USED IN THE TOWN OF ARLINGTON.

TOGETHER WITH THE RIGHTS AND EASEMENTS SET FORTH IN EASEMENT AGREEMENT DATED DECEMBER 31, 2002 RECORDED IN BOOK 37850, PAGE 624.

REFERENCES:

1. THE TAX ASSESSOR'S MAP OF ARLINGTON, MIDDLESEX COUNTY, MAP 57.
2. MAP ENTITLED "NATIONAL FLOOD INSURANCE PROGRAM, FIRM, FLOOD INSURANCE RATE MAP, MIDDLESEX COUNTY, MASSACHUSETTS (ALL JURISDICTIONS) PANEL 416 OF 656," COMMUNITY-PANEL NUMBER 250177 0416 E, MAP EFFECTIVE: JUNE 4, 2010.
3. MAP ENTITLED "PLAN OF LOTS AND EASEMENTS IN ARLINGTON, MA" DATED OCTOBER 23, 2006, RECORDED IN THE SOUTH MIDDLESEX REGISTRY OF DEEDS AS PLAN NO. 1072 OF 2007.
4. MAP ENTITLED "PLAN OF LAND IN ARLINGTON, MA" DATED DECEMBER 28, 2018, RECORDED IN THE SOUTH MIDDLESEX REGISTRY OF DEEDS AS PLAN NO. 110 OF 2019.
5. WATER MAPPING PROVIDED BY THE TOWN ENGINEERING DEPARTMENT.
6. MAP ENTITLED "PLAN OF LOTS AND EASEMENTS IN ARLINGTON, MA" DATED JANUARY 21, 2003, RECORDED IN THE SOUTH MIDDLESEX REGISTRY OF DEEDS AS PLAN NO. 83 OF 2003 IN BOOK 37850 PAGE 612.
7. MAP ENTITLED "PLAN OF LAND IN ARLINGTON MASS" DATED SEPTEMBER 13, 1945, RECORDED IN THE SOUTH MIDDLESEX REGISTRY OF DEEDS AS PLAN NO. 172 OF 1946.
8. MAP ENTITLED "AS-BUILT GEOTHERMAL SITE PLAN 1167R MASSACHUSETTS AVE, ARLINGTON, MA PREPARED FOR ACHIEVE RENEWABLE" DATES JANUARY 4, 2016 PREPARED BY PAUL LINDHOLM, P.E.
9. MAP ENTITLED "ALTA / ACSM LAND TITLE SURVEY IN ARLINGTON, MA," DATED JANUARY 21, 2003 PREPARED BY RIM ENGINEERING CO.

THIS SURVEY IS CERTIFIED TO:  
GOULSTON & STORRS PC  
1165R MASS MA PROPERTY, LLC  
CHICAGO TITLE INSURANCE COMPANY  
SSI FUND ACQUISITIONS LLC  
YUKON REALTY ASSOCIATES, LLC  
ARLINGTON CENTER GARAGE & SERVICE CORP.

THIS IS TO CERTIFY THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IT WAS BASED WERE MADE IN ACCORDANCE WITH THE "2016 MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/NSPS LAND TITLE SURVEYS", JOINTLY ESTABLISHED AND ADOPTED BY ALTA AND NSPS, AND INCLUDES ITEMS 2, 3, 4, 5, 6, 7 & 9, 11, 13, 14, 16, 17, 18 & 19 OF TABLE A THEREOF. THE FIELDWORK WAS COMPLETED ON DECEMBER 3, 2019.

NOT A VALID ORIGINAL DOCUMENT UNLESS EMBOSSED WITH RAISED IMPRESSION OR STAMPED WITH A BLUE INK SEAL



GERRY L. HOLDRIGHT, PLS  
MASSACHUSETTS PROFESSIONAL LAND SURVEYOR #49211

7-16-2020  
DATE

1	REVISED PER NEW CLIENT NAME & CERTIFIED PARTIES	-	R.J.K.	G.L.H.	7-16-2020
No.	DESCRIPTION OF REVISION	FIELD CREW	DRAWN	APPROVED	DATE

FIELD DATE 12-3-2019	<b>ALTA/NSPS LAND TITLE SURVEY</b> <b>1165R MASS MA PROPERTY, LLC</b> 1165R MASSACHUSETTS AVENUE MAP 57, BLOCK 2, LOT 10B & PART OF LOT 15 TOWN OF ARLINGTON, MIDDLESEX COUNTY COMMONWEALTH OF MASSACHUSETTS
FIELD BOOK NO. MA19-20	
FIELD BOOK PG. 25	
FIELD CREW S.B.H.	

DRAWN: A.L.S.	<b>CONTROL POINT ASSOCIATES, INC.</b> 352 TURNPIKE ROAD SOUTHBOROUGH, MA 01772 508.948.3000 - 508.948.3003 FAX	ALBANY, NY 5182175010 CHALFONT, PA 2157129600 MANHATTAN, NY 6467800411 MT LAUREL, NJ 6098572999 WARREN, NJ 9086600999	
REVIEWED: A.J.D.		APPROVED: G.L.H.	DWG. NO. 4 OF 4

DATE 4-6-2020	SCALE N/A	FILE NO. 03-190272
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## Section 3.2.7 Preliminary Scaled Architectural Drawings

Please see the enclosed Preliminary Scaled Architectural Drawings set containing the following:

ZBA SECTION NO.	SHEET/ DWG NO.	TITLE	DATE
3.2.7	A000	Title Sheet	June 18, 2020
3.2.7	L101	Landscape Plan	June 16, 2020
3.2.7	A001	3D Views	June 18, 2020
3.2.7	A002	Site Plan	June 16, 2020
3.2.7	A003	Overall Floor Plans	June 16, 2020
3.2.7	A004	Building #1, #3, #4 First Floor Plan	June 16, 2020
3.2.7	A005	Building #1, #4 Second Floor Plan	June 16, 2020
3.2.7	A006	Building #1, #4 Third Floor Plan	June 16, 2020
3.2.7	A007	Building #1, #4 Fourth Floor Plan	June 16, 2020
3.2.7	A008	Building #4 Fifth & Sixth Floor Plans	June 16, 2020
3.2.7	A009	Building #4 Roof Plan	June 16, 2020
3.2.7	A010	Building #2 Floor Plans	June 16, 2020
3.2.7	A011	Typical Unit Plans	June 16, 2020
3.2.7	A012	Building #1, #4 Elevations	June 16, 2020
3.2.7	A013	Building #2 Elevations	June 16, 2020
3.2.7	A014	Building Sections & Building #3 Elevations	June 16, 2020





# Redevelopment of 1165R Massachusetts Avenue

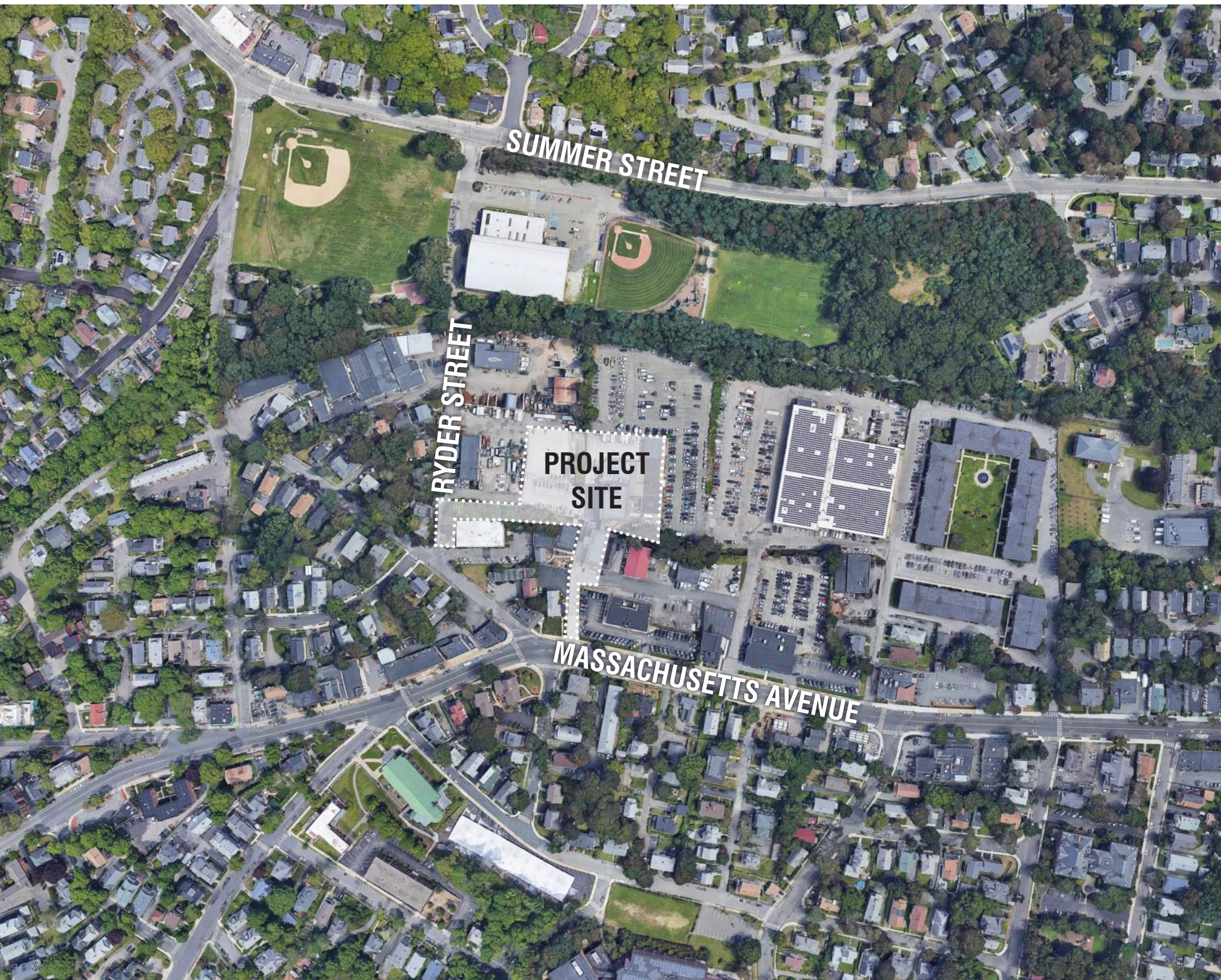
## Arlington, MA

### Drawing List

C-301	Site Layout Plan
C-401	Grading and Drainage Plan
C-501	Utility Plan
L-101	Landscape Plan
A001	3D Views
A002	Site Plan
A003	Overall Floor Plans
A004	Building #1, #3, #4 First Floor Plan
A005	Building #1, #4 Second Floor Plan
A006	Building #1, #4 Third Floor Plan
A007	Building #1, #4 Fourth Floor Plan
A008	Building #4 Fifth & Sixth Floor Plans
A009	Building #4 Roof Plan
A010	Building #2 Floor Plans
A011	Typical Unit Plans
A012	Building #1, #4 Elevations
A013	Building #2 Elevations
A014	Building Sections & Building #3 Elevations



Existing Site Plan



Location Plan

ARCHITECT

bh+a

Bargmann Hendrie + Archetype, Inc.  
9 Channel Center Street  
Boston, MA 02210  
617 350-0450 Tel

PROJECT NAME

**Redevelopment  
of 1165R  
Massachusetts  
Avenue**  
1165R Massachusetts Avenue,  
Arlington, MA 02476

CLIENT

**1165R Mass MA  
Property LLC**  
  
c/o Spaulding & Slye Investments  
One Post Office Square  
26th Floor  
Boston, MA 02109

PROJECT TEAM

**Structural Engineer**  
Velitas & Velitas  
639 Granite St.  
Braintree, MA 02184  
(781) 843-2863

**MEP/FP Engineer**  
Wozny/Barbar & Associates, Inc.  
Consulting Engineers  
1076 Washington St.  
Hanover, MA 02339  
(781) 826-4144

**Civil Engineer**  
Bohler Engineering  
352 Turnpike Road  
Southborough, MA 01772  
(508) 480-9900

**Landscape Architect**  
Kyle Zick Landscape Architecture  
86 Bromfield Street, Suite 202  
Boston, MA 02108

REVISIONS

1

2

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DATE

DRAWING TITLE

**Cover Page**

DRAWING INFORMATION

REGISTERED ARCHITECT

MASSACHUSETTS

NO. 5380

2019-2024

MA

June 18, 2020

DATE OF ISSUE

MassHousing

DESCRIPTION

Michael Barker

SCALE

3426.00

PROJECT #

[3426.rvt]

FILE NAME

DRAWING NUMBER

**A000**

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6/17/2020 8:59:16 AM Michael Barker

449 of 501



165R Massachusetts Avenue,  
Arlington, MA 02476

## CLIENT

Spaulding & Slye Investments  
One Post Office Square  
5th Floor  
Boston, MA 02109

## PROJECT TEAM

**Structural Engineer**  
Veitas & Veitas  
39 Granite St  
Braintree, MA 02184  
(617) 843-2863

**EP/FP Engineer**  
Tosny/Barbar & Associates, Inc.  
Consulting Engineers  
176 Washington St  
Amherst, MA 02339  
(81) 826-4144

**Civil Engineer**  
 Bohler Engineering  
 62 Turnpike Road  
 Southborough, MA 01772  
 (800) 480-9900

**Landscape Architect**  
 Zick Landscape Architecture  
 6 Bromfield Street, Suite 202  
 Boston, MA 02108

## REVISIONS

DATE \_\_\_\_\_

## DRAWING TITLE

## Landscape Plan

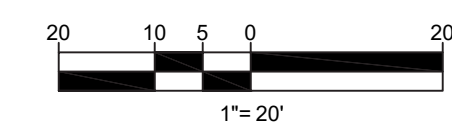
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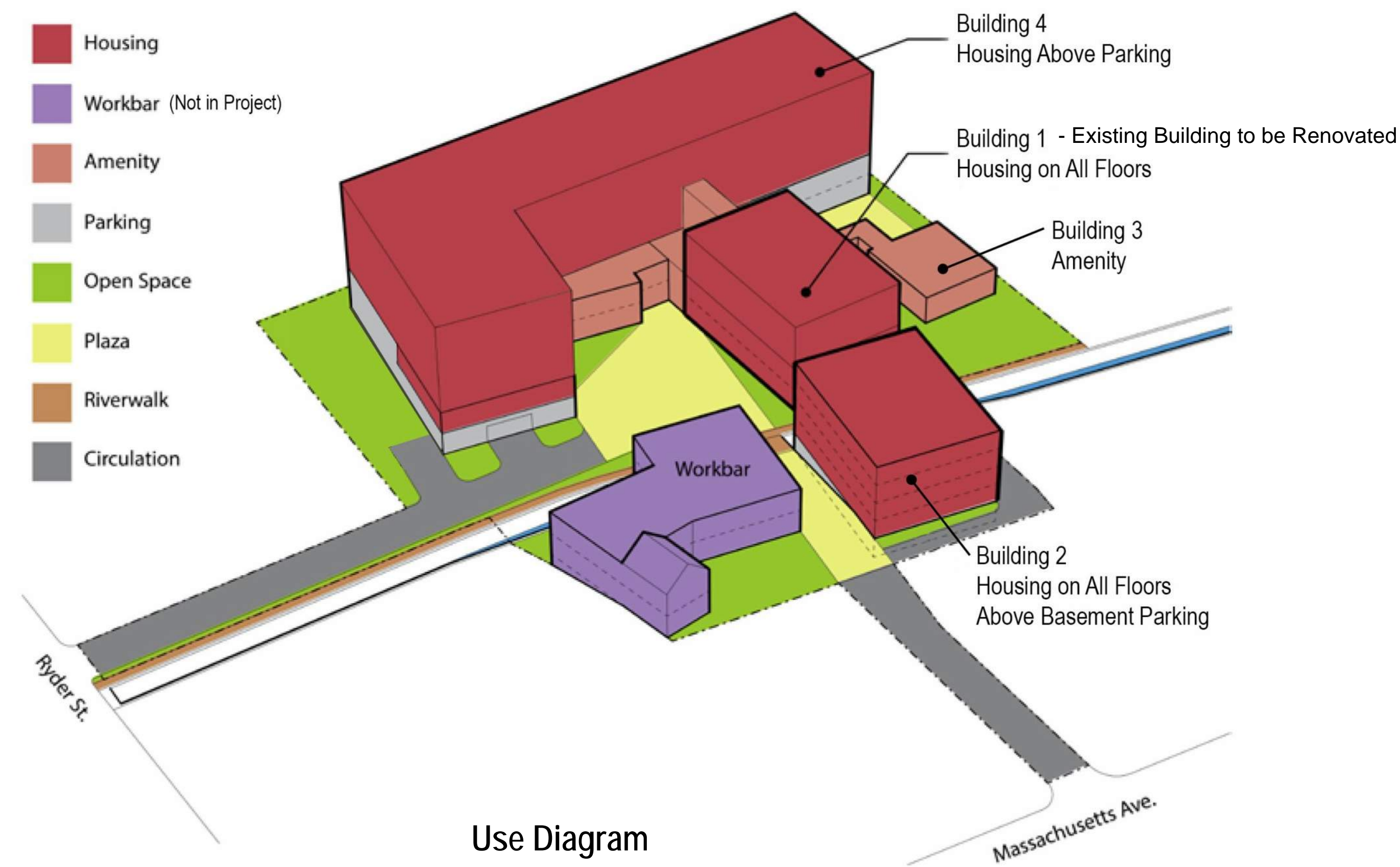
DATE OF ISSUE	Author
DESCRIPTION	RB KZ
SCALE	DRAWN BY
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PROJECT #	FILE NAME

## DRAWING NUMBER

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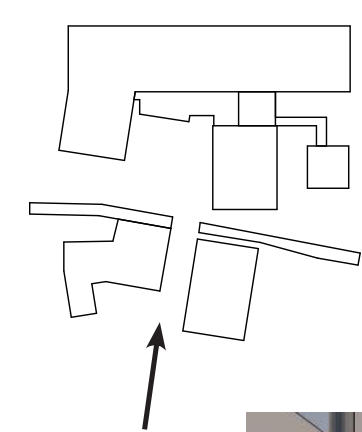




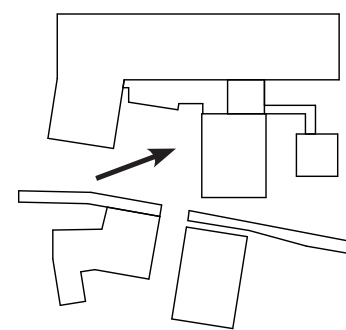
Use Diagram



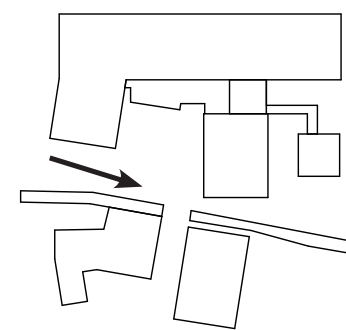
WIDENING THE BRIDGE: Existing & Proposed



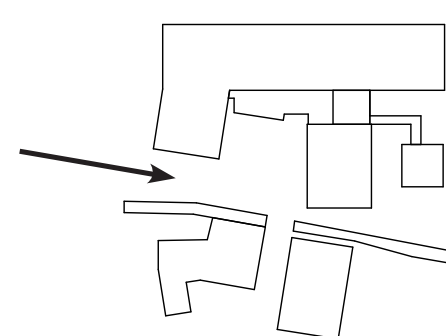
View at "Entry" to 1165R



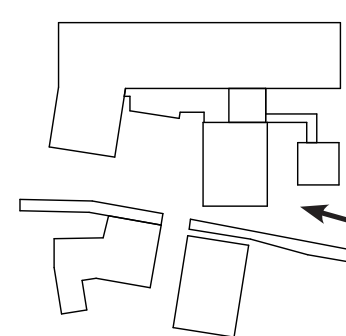
View of Building 4 and Building 1 with Common Entry



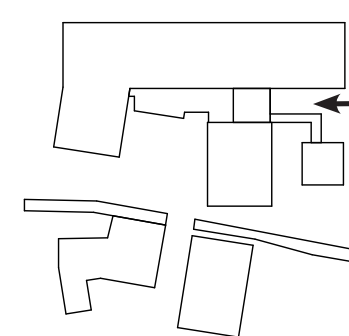
View along Mill Brook between Building 1 and 2



View along Mill Brook looking East



View of Eastern Courtyard Spaces



View of Building Exterior Amenity Space

**ARCHITECT**  
**bh+a**  
 Bargmann Hendrie + Archetype, Inc.  
 9 Channel Center Street  
 Boston, MA 02210  
 617 350-0450 Tel

**PROJECT NAME**  
**Redevelopment of 1165R Massachusetts Avenue**  
 1165R Massachusetts Avenue, Arlington, MA 02476

**CLIENT**  
**1165R Mass MA Property LLC**  
 c/o Spaulding & Slye Investments  
 One Post Office Square  
 26th Floor  
 Boston, MA 02109

**PROJECT TEAM**  
**Structural Engineer**  
 Velitas & Velitas  
 639 Granite St.  
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**MEP/FP Engineer**  
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 Consulting Engineers  
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 (781) 826-4144  
**Civil Engineer**  
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 (508) 480-9900  
**Landscape Architect**  
 Kyle Zick Landscape Architecture  
 36 Bromfield Street, Suite 202  
 Boston, MA 02108

REVISIONS	
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	DATE

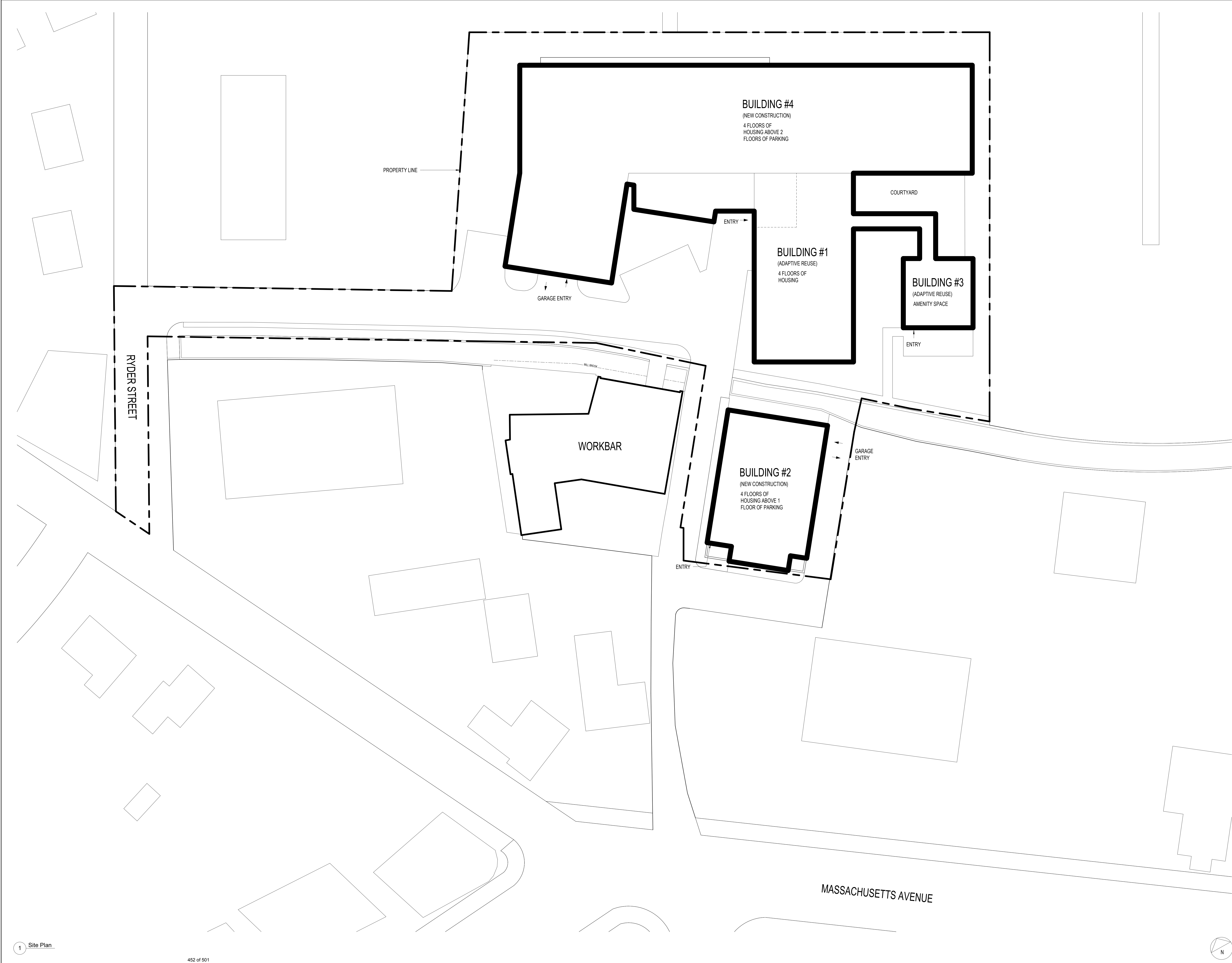
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**3D Views**

**DRAWING INFORMATION**

June 18, 2020  
 DATE OF ISSUE  
 MassHousing  
 DESCRIPTION Michael Barker  
 SCALE 3/4" = 1'-0" (3/4" = 1'-0")  
 PROJECT # FILE NAME

**DRAWING NUMBER**  
**A001**





ARCHITECT

bh+a

Bargmann Hendrie + Archetype, Inc.  
9 Channel Center Street  
Boston, MA 02210  
617.350-0450 Tel

PROJECT NAME

**Redevelopment  
of 1165R  
Massachusetts  
Avenue**  
1165R Massachusetts Avenue,  
Arlington, MA 02476

CLIENT

**1165R Mass MA  
Property LLC**  
  
c/o Spaulding & Slye Investments  
One Post Office Square  
26th Floor  
Boston, MA 02109

PROJECT TEAM

**Structural Engineer**  
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639 Granite St  
Braintree, MA 02184  
(781) 843-2863

**MEP/FP Engineer**  
Wozny/Barbar & Associates, Inc.  
Consulting Engineers  
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(781) 826-4144

**Civil Engineer**  
Bohler Engineering  
352 Turnpike Road  
Southborough, MA 01772  
(508) 480-9900

**Landscape Architect**  
Kyle Zick Landscape Architecture  
36 Bromfield Street, Suite 202  
Boston, MA 02108

REVISIONS

1	
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DATE

DRAWING TITLE

**Site Plan**

DRAWING INFORMATION

REGISTERED ARCHITECT

JOEL D. BARGMANN

No. 5380

EXPIRATION

MA

2023

June 16, 2020

DATE OF ISSUE

MassHousing

DESCRIPTION

Y = 20'-0"

SCALE

3/4" = 1'-0"

PROJECT #

Michael  
Barker

DRAWN BY

[3426.rvt]

FILE NAME

DRAWING NUMBER

**A002**

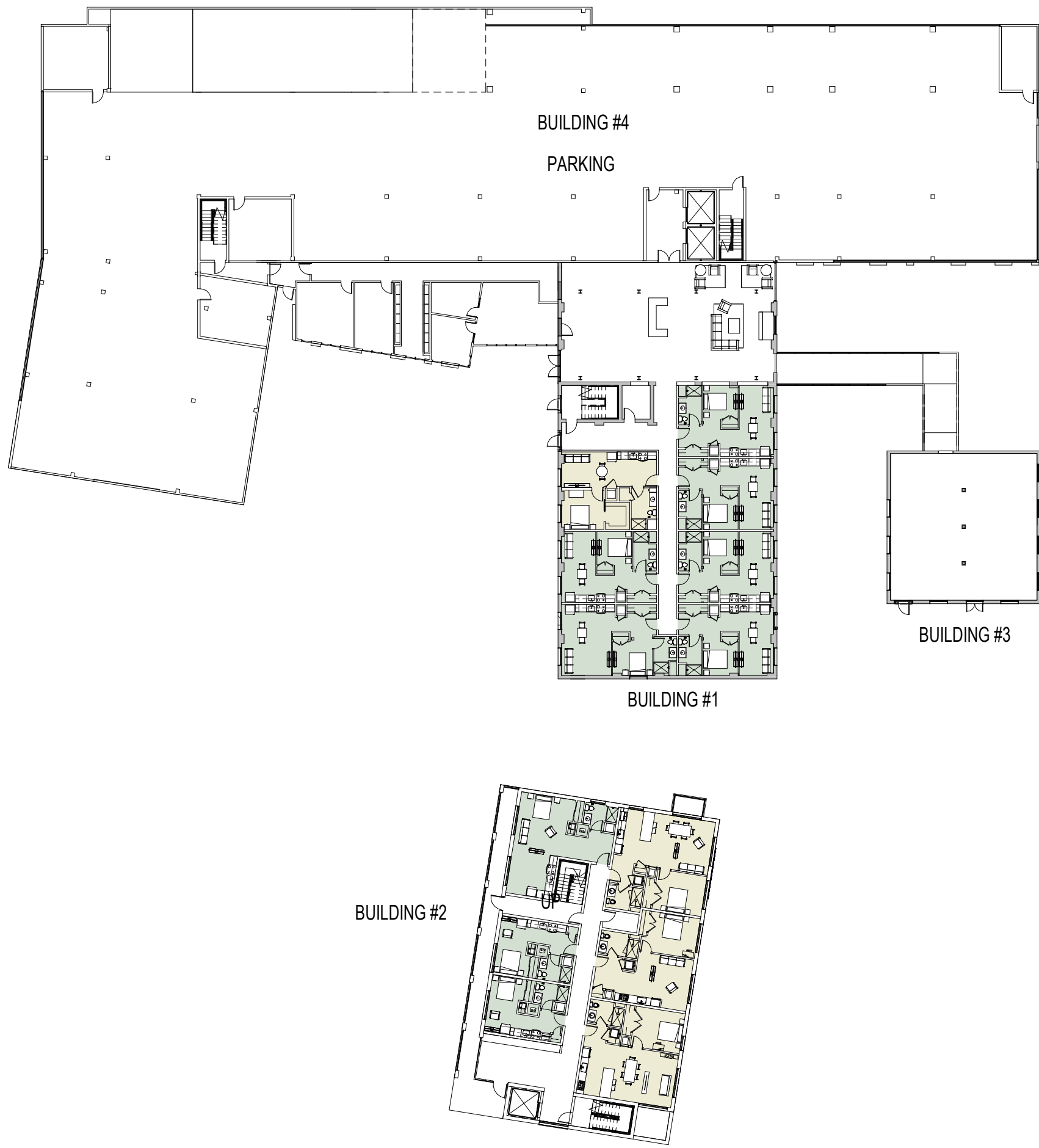
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6/23/2020 8:57:37 AM Michael Barker

1 Site Plan

452 of 501





1 First Floor Plan - Overall



2 Second Floor Plan - Overall



3 Third Floor Plan - Overall



4 Fourth Floor Plan - Overall



5 Fifth Floor Plan - Overall



6 Sixth Floor Plan - Overall

ARCHITECT

bh+a

Bargmann Hendrie + Archetype, Inc.  
9 Channel Center Street  
Boston, MA 02210  
617 350-0450 Tel

PROJECT NAME

**Redevelopment  
of 1165R  
Massachusetts  
Avenue**

1165R Massachusetts Avenue,  
Arlington, MA 02476

CLIENT

**1165R Mass MA  
Property LLC**

c/o Spaulding & Slye Investments  
One Post Office Square  
26th Floor  
Boston, MA 02109

PROJECT TEAM

**Structural Engineer**  
Veltas & Veltas  
639 Granite St  
Braintree, MA 02184  
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**MEP/FP Engineer**  
Wozny/Barbar & Associates, Inc.  
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(781) 826-4144

**Civil Engineer**  
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(508) 480-9900

**Landscape Architect**  
Kyle Zick Landscape Architecture  
36 Bromfield Street, Suite 202  
Boston, MA 02108

REVISIONS

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4		
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	DATE	

DRAWING TITLE

**Overall Floor  
Plans**

DRAWING INFORMATION



June 16, 2020  
DATE OF ISSUE  
MassHousing  
DESCRIPTION  
1/32" = 1'-0"  
SCALE  
3426.00  
PROJECT #  
Author  
DRAWN BY  
[3426.rvt]  
FILE NAME

DRAWING NUMBER

**A003**

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1 Building #1, #3, #4 First Floor Plan

ARCHITECT

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Bargmann Hendrie + Archetype, Inc.  
9 Channel Center Street  
Boston, MA 02210  
617.350-0450 Tel

PROJECT NAME

**Redevelopment  
of 1165R  
Massachusetts  
Avenue**  
1165R Massachusetts Avenue,  
Arlington, MA 02476

CLIENT

**1165R Mass MA  
Property LLC**  
  
c/o Spaulding & Slye Investments  
One Post Office Square  
26th Floor  
Boston, MA 02109

PROJECT TEAM

**Structural Engineer**  
Vellaz & Vellaz  
639 Granite St  
Braintree, MA 02184  
(781) 843-2863  
**MEP/FP Engineer**  
Wozny/Barbar & Associates, Inc.  
Consulting Engineers  
1076 Washington St  
Hanover, MA 02339  
(781) 826-4144  
**Civil Engineer**  
Bohler Engineering  
352 Turnpike Road  
Southborough, MA 01772  
(508) 480-9900  
**Landscape Architect**  
Kyle Zick Landscape Architecture  
36 Bromfield Street, Suite 202  
Boston, MA 02108

REVISIONS

1	
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3	
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5	

DATE

DRAWING TITLE

**Building #1, #3,  
#4 First Floor  
Plan**

DRAWING INFORMATION

REGISTERED ARCHITECT  
STATE OF MASSACHUSETTS  
No. 5330  
6/23/2019  
M.A.

June 16, 2020  
DATE OF ISSUE  
MassHousing  
DESCRIPTION  
1/8" = 1'-0"  
SCALE  
3426.00  
PROJECT #

Michael  
Barker  
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[3426.rvt]  
FILE NAME

DRAWING NUMBER

**A004**

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6/25/2020 1:27:46 PM Michael Barker

454 of 501





2 Building #4 Second Floor

ARCHITECT

bh+a

Bargmann Hendrie + Archetype, Inc.  
9 Channel Center Street  
Boston, MA 02210  
617.350-0450 Tel

PROJECT NAME

**Redevelopment  
of 1165R  
Massachusetts  
Avenue**  
1165R Massachusetts Avenue,  
Arlington, MA 02476

CLIENT

**1165R Mass MA  
Property LLC**  
  
c/o Spaulding & Slye Investments  
One Post Office Square  
26th Floor  
Boston, MA 02109

PROJECT TEAM

**Structural Engineer**  
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Bohler Engineering  
352 Turnpike Road  
Southborough, MA 01772  
(508) 480-9900  
**Landscape Architect**  
Kyle Zick Landscape Architecture  
36 Bromfield Street, Suite 202  
Boston, MA 02108

REVISIONS

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DATE

DRAWING TITLE

**Building #1, #4  
Second Floor  
Plan**

DRAWING INFORMATION

REGISTERED ARCHITECT

MA

NO. 5380

EXPIRATION

2023-12-31

DATE OF ISSUE

June 16, 2020

DESCRIPTION

MassHousing

SCALE

1/8" = 1'-0"

PROJECT #

3426.rvt

DRAWN BY

Michael Barker

FILE NAME

DRAWING NUMBER

**A005**

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BUILDING #4



1 Building #4 Third Floor

ARCHITECT  
**bh+a**  
Bargmann Hendrie + Archetype, Inc.  
9 Channel Center Street  
Boston, MA 02210  
617.350.0450 Tel

PROJECT NAME  
**Redevelopment  
of 1165R  
Massachusetts  
Avenue**  
1165R Massachusetts Avenue,  
Arlington, MA 02476


CLIENT  
**1165R Mass MA  
Property LLC**  
  
c/o Spaulding & Slye Investments  
One Post Office Square  
26th Floor  
Boston, MA 02109

PROJECT TEAM  
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(508) 480-9900  
**Landscape Architect**  
Kyle Zick Landscape Architecture  
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Boston, MA 02108

REVISIONS	
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DRAWING TITLE  
**Building #1, #4  
Third Floor  
Plan**

DRAWING INFORMATION



June 16, 2020  
DATE OF ISSUE  
MassHousing  
DESCRIPTION  
1st + 1st  
SCALE  
3/4" = 1'-0"  
PROJECT #  
Michael Barker  
DRAWN BY  
[3426.rvt]  
FILE NAME

DRAWING NUMBER  
**A006**



BUILDING #4



BUILDING #1

BUILDING #3

1 Building #4 Fourth Floor

ARCHITECT

bh+a

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617.350-0450 Tel

PROJECT NAME

**Redevelopment  
of 1165R  
Massachusetts  
Avenue**  
1165R Massachusetts Avenue,  
Arlington, MA 02476

CLIENT

**1165R Mass MA  
Property LLC**  
  
c/o Spaulding & Slye Investments  
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26th Floor  
Boston, MA 02109

PROJECT TEAM

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**Landscape Architect**  
Kyle Zick Landscape Architecture  
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Boston, MA 02108

REVISIONS

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DATE

DRAWING TITLE

**Building #1, #4  
Fourth Floor  
Plan**

DRAWING INFORMATION

REGISTERED ARCHITECT

MASSACHUSETTS

NO. 5330

6/23/2019

MA

June 16, 2020

DATE OF ISSUE

MassHousing

DESCRIPTION

1/8" = 1'-0"

SCALE

3426.00

PROJECT #

Michael Barker

DRAWN BY

[3426.rvt]

FILE NAME

DRAWING NUMBER

**A007**

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C:\Local Revit\3426\_Arlington Mill\_R01\_Michael Barker.rvt  
6/16/2020 3:12:23 PM Michael Barker

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BUILDING #4

BUILDING #1

BUILDING #3

3-BEDROOM UNIT AT 5TH FLOOR ONLY.  
2 BEDROOM UNIT AT FLOORS 3,4 AND 6.

ROOF DECK

1 Building #4 Fifth & Sixth Floor Plans

ARCHITECT

bh+a

Bargmann Hendrie + Archetype, Inc.  
9 Channel Center Street  
Boston, MA 02210  
617.350-0450 Tel

PROJECT NAME

**Redevelopment  
of 1165R  
Massachusetts  
Avenue**  
1165R Massachusetts Avenue,  
Arlington, MA 02476

CLIENT

**1165R Mass MA  
Property LLC**  
  
c/o Spaulding & Slye Investments  
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26th Floor  
Boston, MA 02109

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**Landscape Architect**  
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Boston, MA 02108

REVISIONS

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DATE

DRAWING TITLE

**Building #4  
Fifth & Sixth  
Floor Plans**

DRAWING INFORMATION

REGISTERED ARCHITECT

NO. 5330

6/23/2019

MA

Michael Barker

DRWNLBY

[3426.rvt]

FILE NAME

June 16, 2020

DATE OF ISSUE

MassHousing

DESCRIPTION

1/8" = 1'-0"

SCALE

3426.00

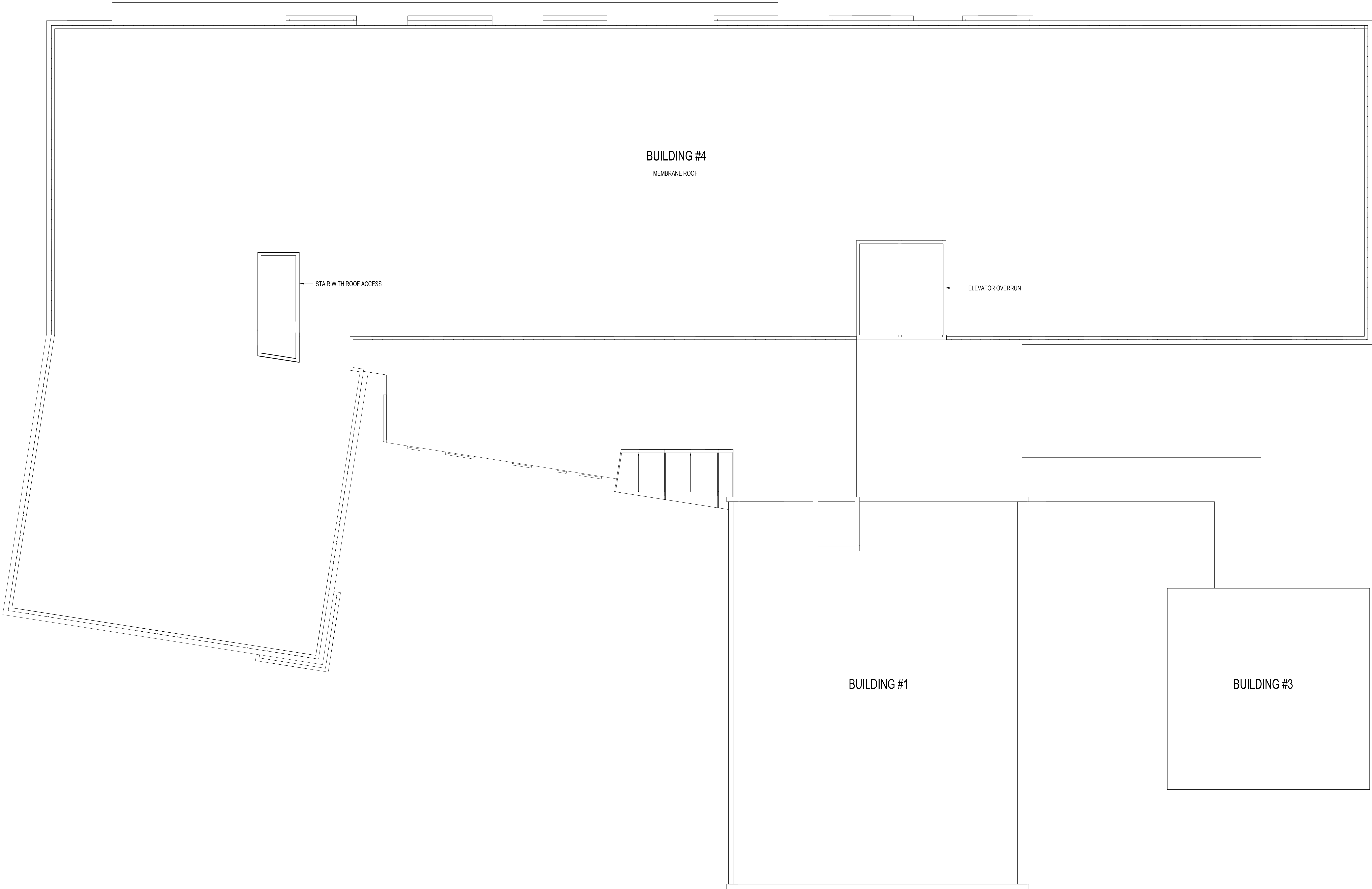
PROJECT #

DRAWING NUMBER

**A008**

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1 Building #4 Roof

ARCHITECT

bh+a

Bargmann Hendrie + Archetype, Inc.  
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Boston, MA 02210  
617.350-0450 Tel

PROJECT NAME

**Redevelopment  
of 1165R  
Massachusetts  
Avenue**  
1165R Massachusetts Avenue,  
Arlington, MA 02476

CLIENT

**1165R Mass MA  
Property LLC**  
  
c/o Spaulding & Slye Investments  
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26th Floor  
Boston, MA 02109

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(508) 480-9900  
  
**Landscape Architect**  
Kyle Zick Landscape Architecture  
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Boston, MA 02108

REVISIONS

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DATE

DRAWING TITLE

**Building #4  
Roof Plan**

DRAWING INFORMATION

June 16, 2020  
DATE OF ISSUE  
MassHousing

DESCRIPTION  
1/8" = 1'-0"

Michael  
Barker

DRAWN BY

3426.00  
PROJECT #

[3426.rvt]  
FILE NAME

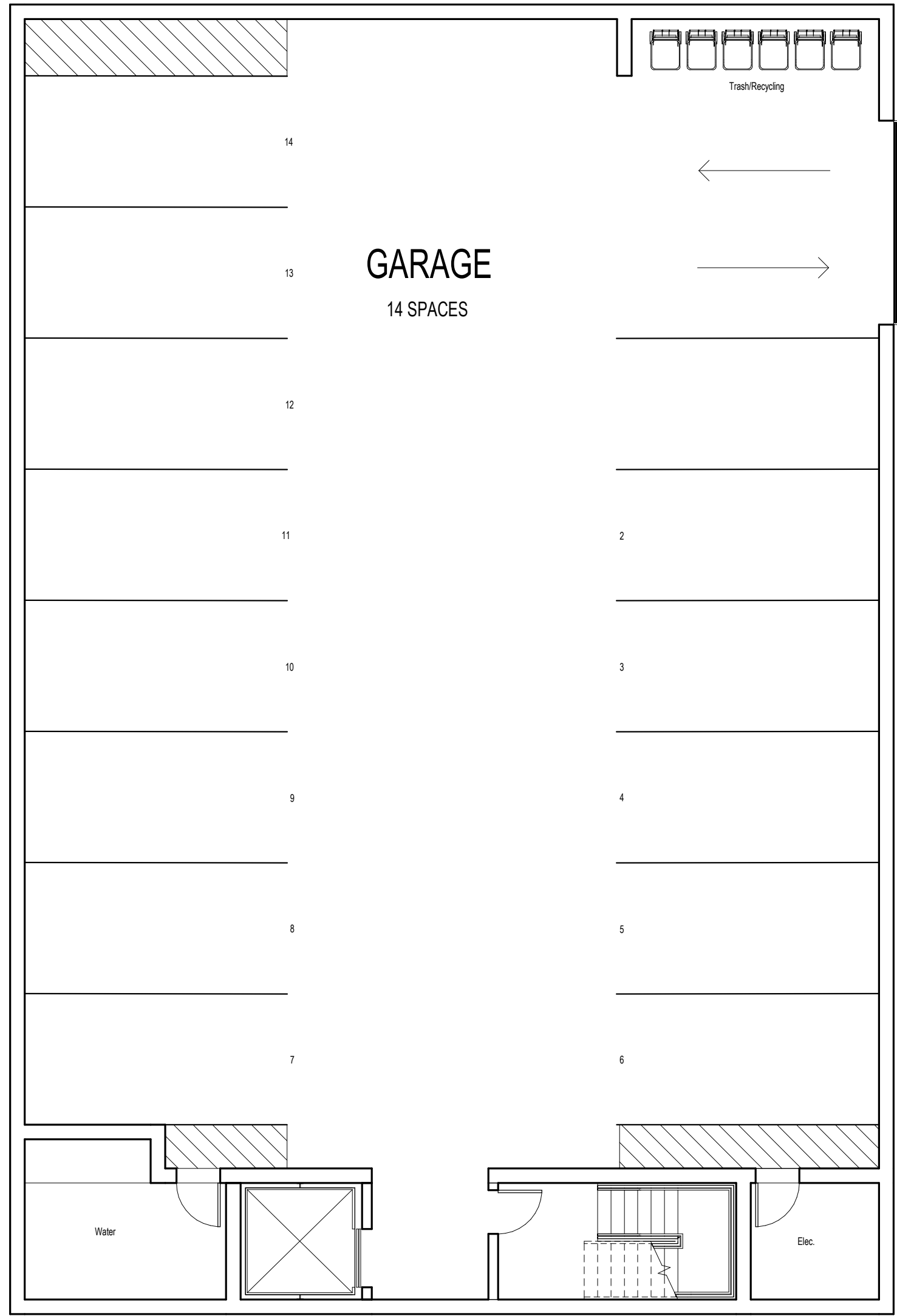
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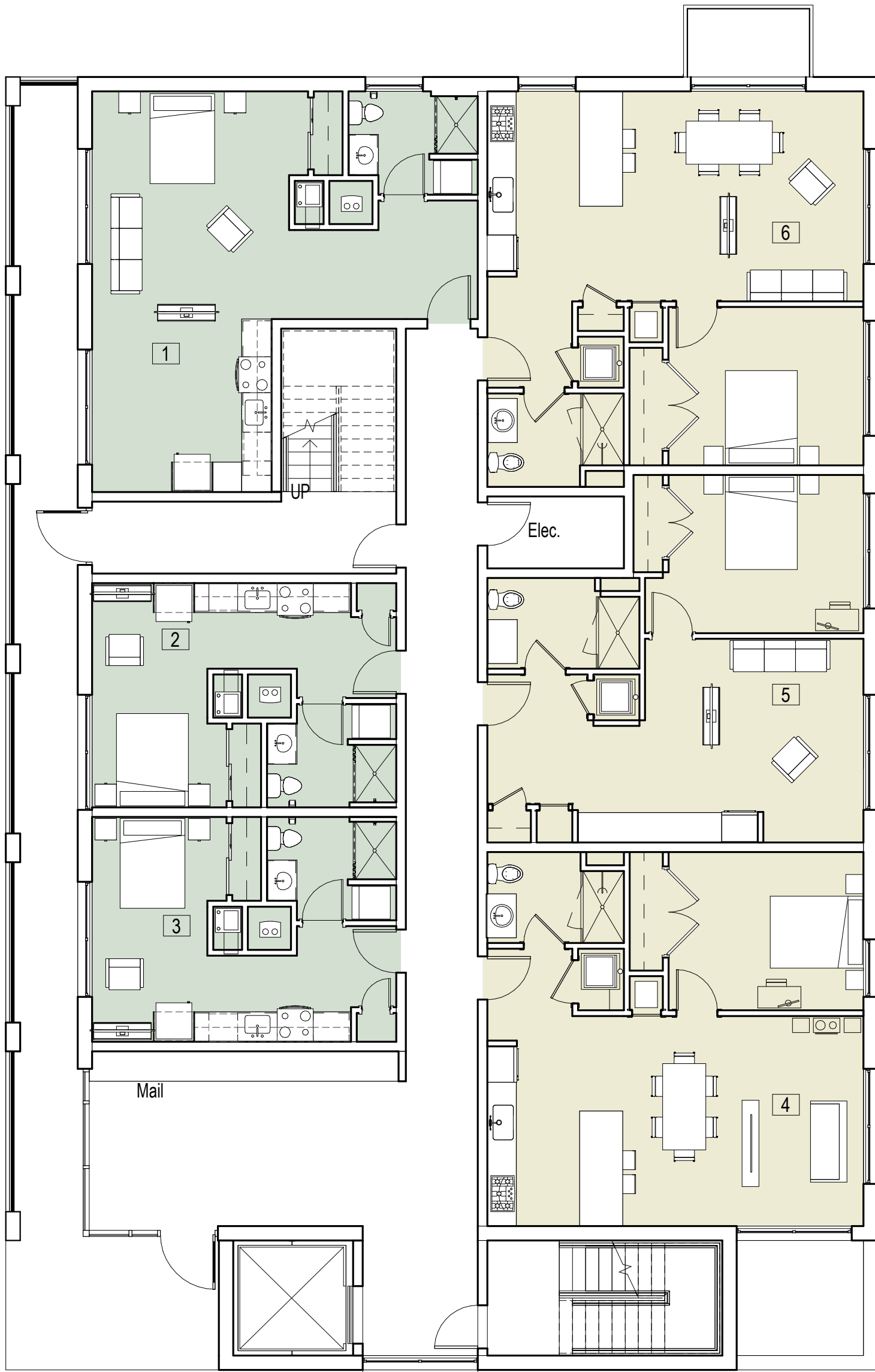
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459 of 501

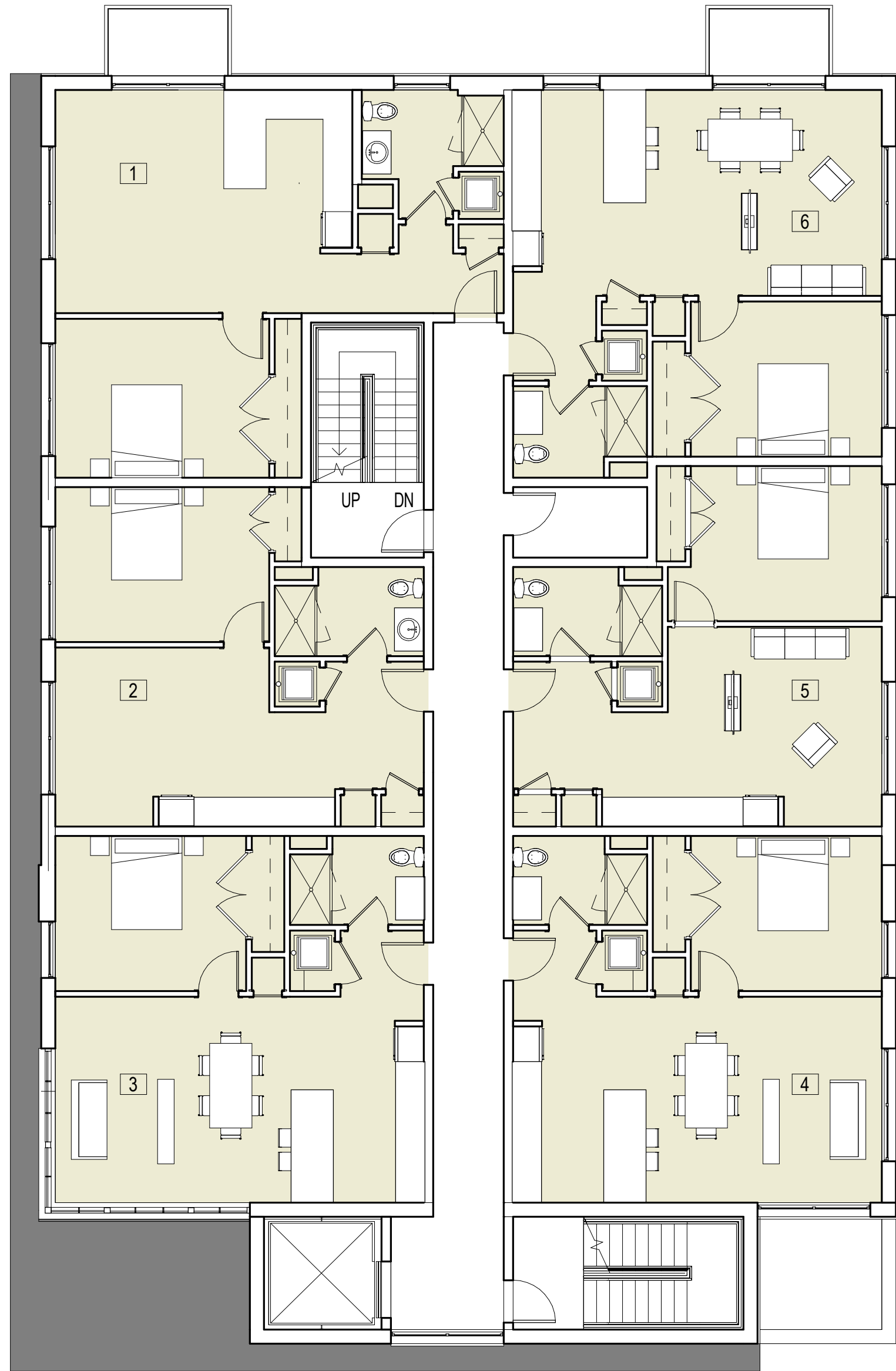




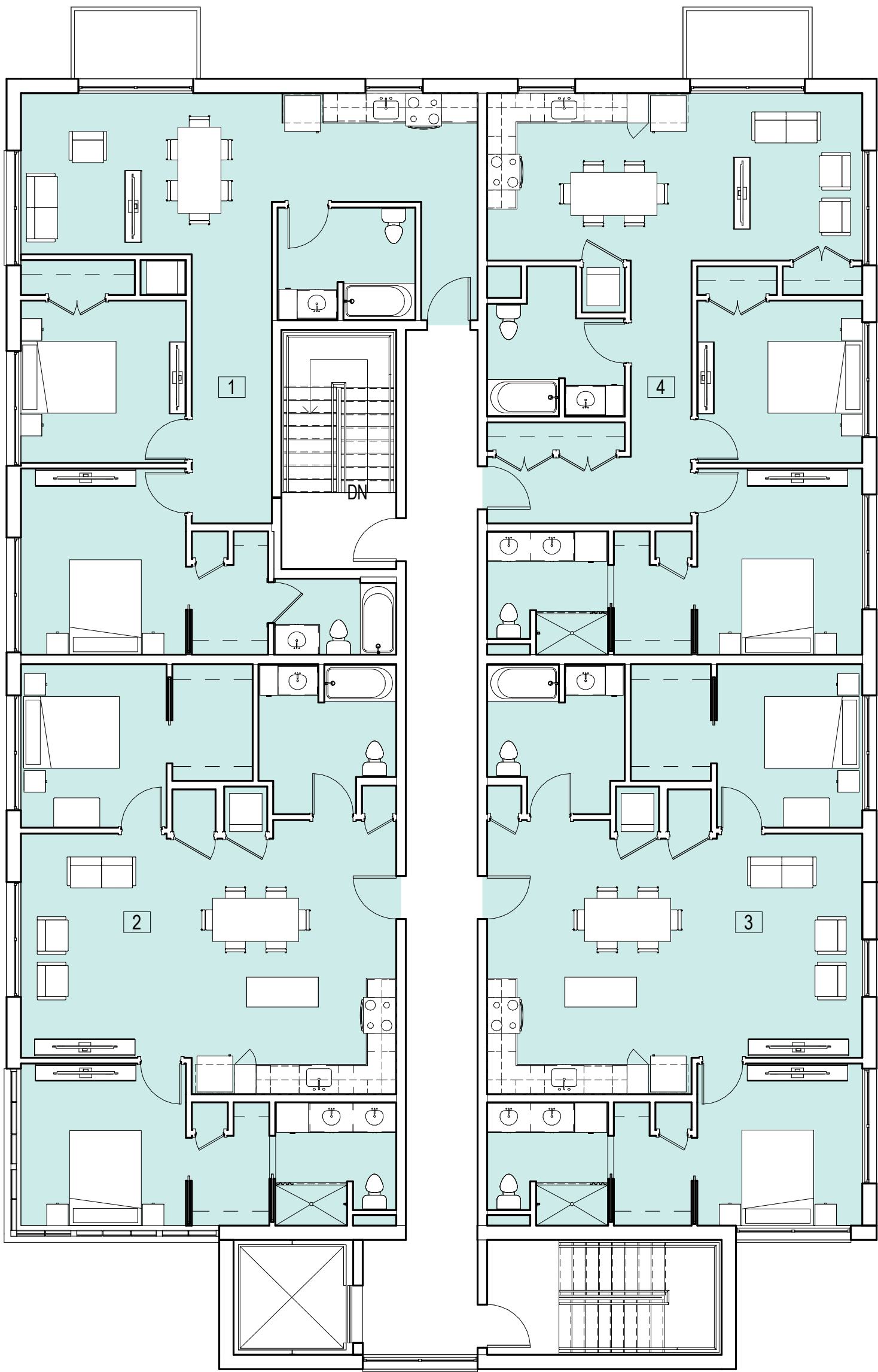
1 Building #2 Parking Plan



2 First Floor Plan



3 Typical Floor Plan 2-3



4 Building #2 Fourth Floor Plan



5 Building #2 Roof

ARCHITECT  
**bh+a**  
Bargmann Hendrie + Archetype, Inc.  
9 Channel Center Street  
Boston, MA 02210  
617-350-0450 Tel


PROJECT NAME  
**Redevelopment  
of 1165R  
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1165R Massachusetts Avenue,  
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Property LLC**  
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Wozny/Barbar & Associates, Inc.  
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**Landscape Architect**  
Kyle Zick Landscape Architecture  
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Boston, MA 02108

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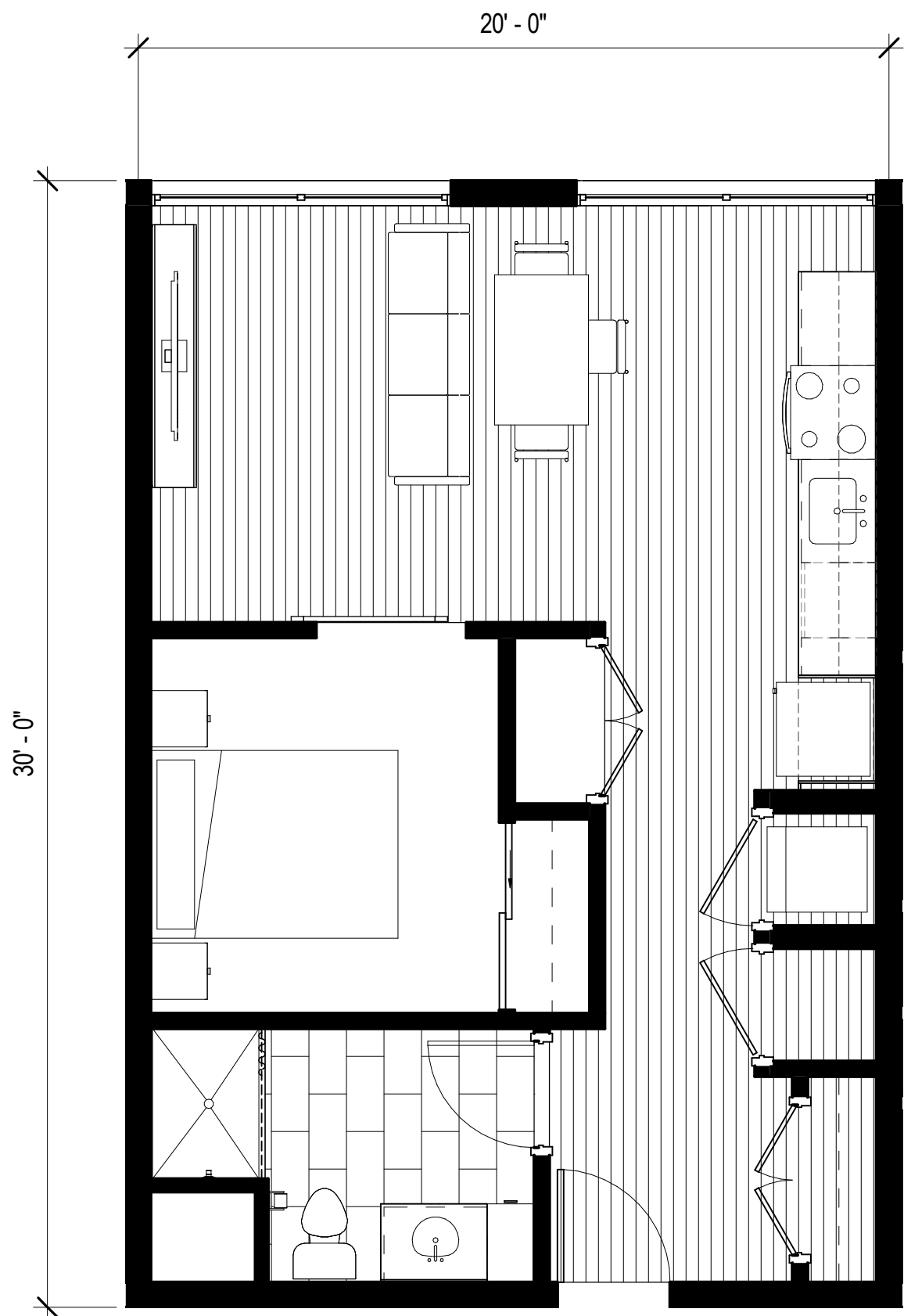
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**Building #2  
Floor Plans**

DRAWING INFORMATION  
  
June 16, 2020  
DATE OF ISSUE  
MassHousing  
DESCRIPTION  
1/8" = 1'-0"  
SCALE  
3426.00 [3426.rvt]  
PROJECT #  
Michael Barker  
DRAWN BY  
FILE NAME

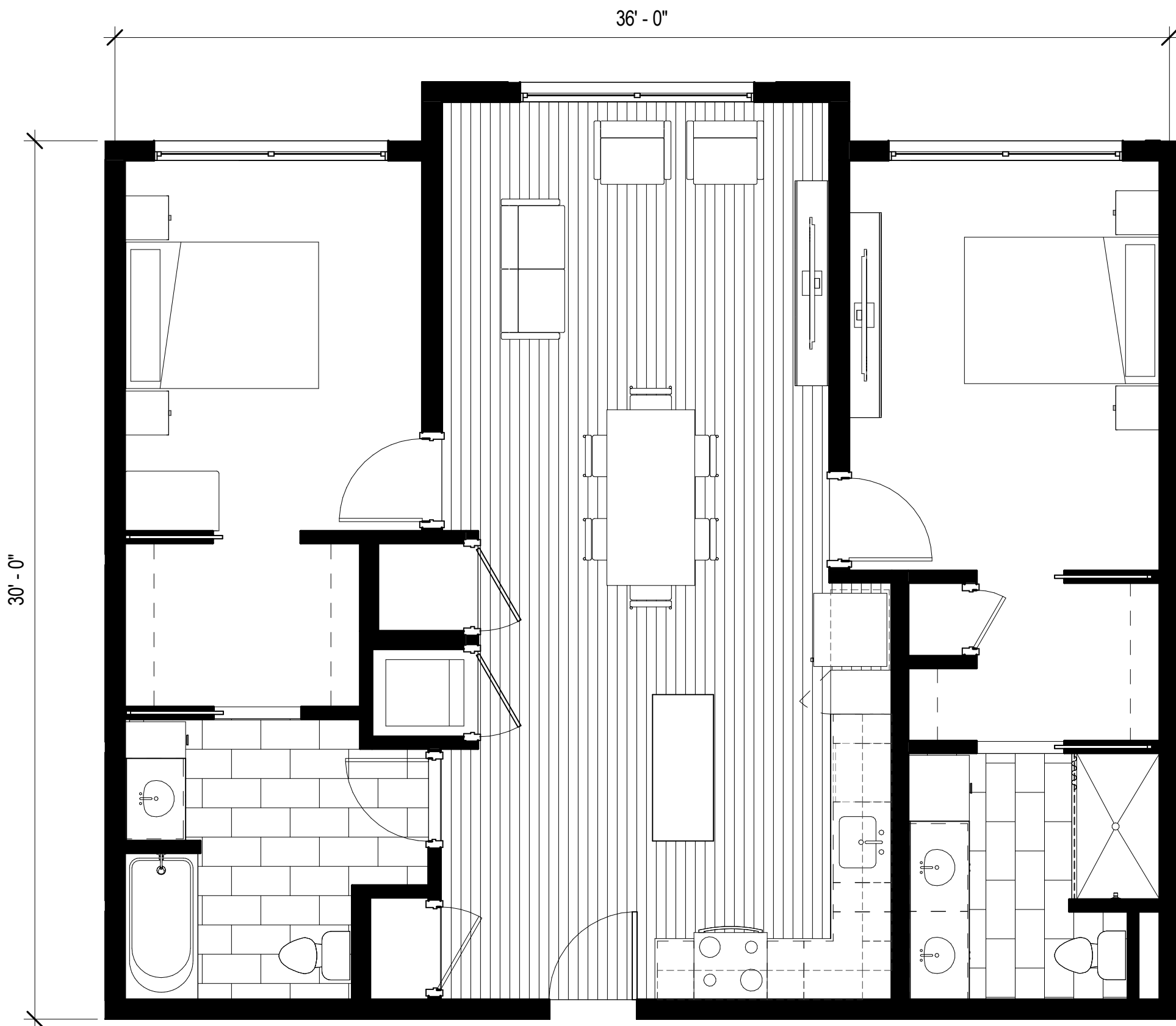
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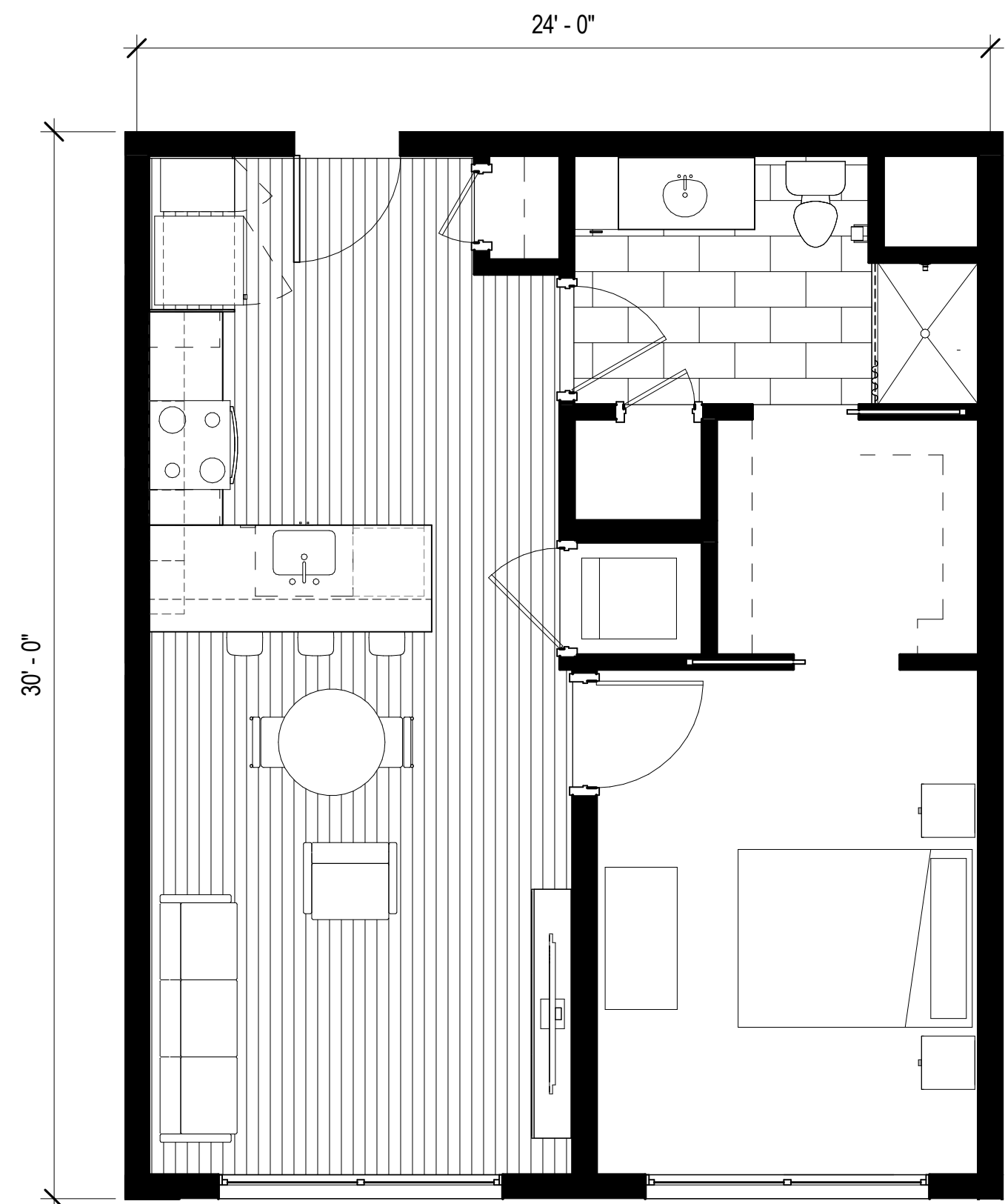




1 Typical Studio



3 Typical 2 BR



2 Typical 1 BR




4 Typical 3 BR

REVISIONS	
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DRAWING TITLE  
**Typical Unit  
Plans**

DRAWING INFORMATION



June 16, 2020  
DATE OF ISSUE  
MassHousing  
DESCRIPTION  
1/4" = 1'-0"  
EQUIP  
3426.00  
PROJECT #

Author  
DRAWN BY  
[3426.rvt]  
FILE NAME

DRAWING NUMBER  
**A011**  
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1 Building #1, #4 South



2 Building #4 North



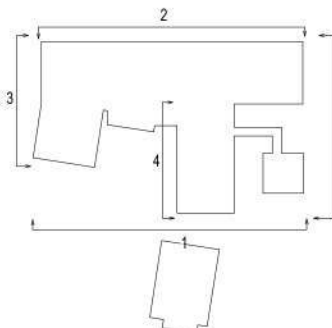
3 Building #4 West



4 Building #1 West



5 Building #1, #4 East



REVISIONS	
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DRAWING TITLE  
**Building #1, #4  
Elevations**

DRAWING INFORMATION	
June 16, 2020	DATE OF ISSUE
Mass Housing	DESCRIPTION
Michael Barker	As indicated
3426.00	SCALE
PROJECT #	FILE NAME

DRAWING NUMBER  
**A012**





1 Building #2 South



3 Building #2 East



2 Building #2 West

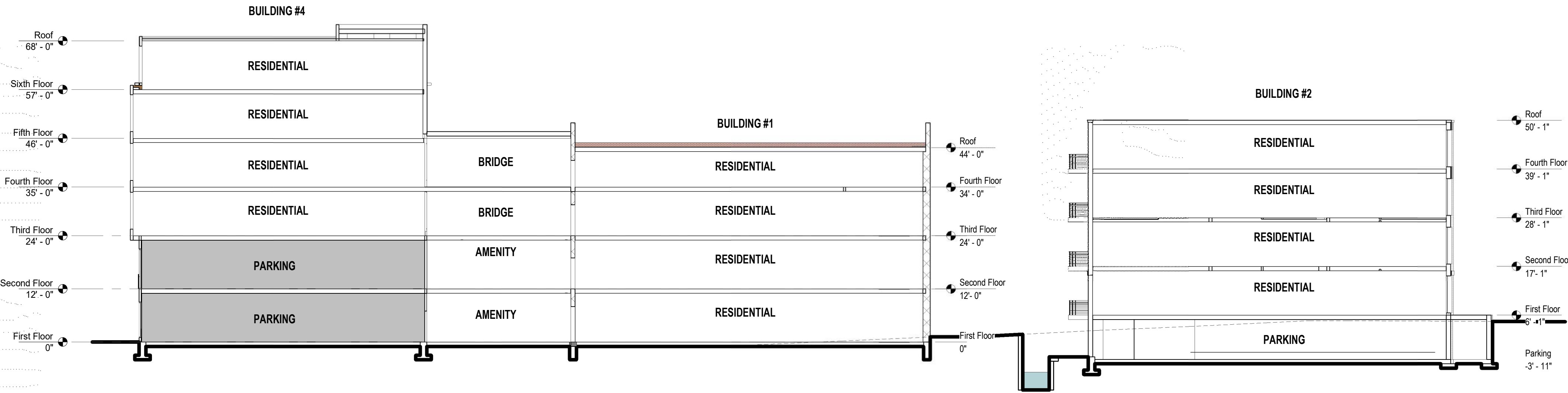


4 Building #2 North

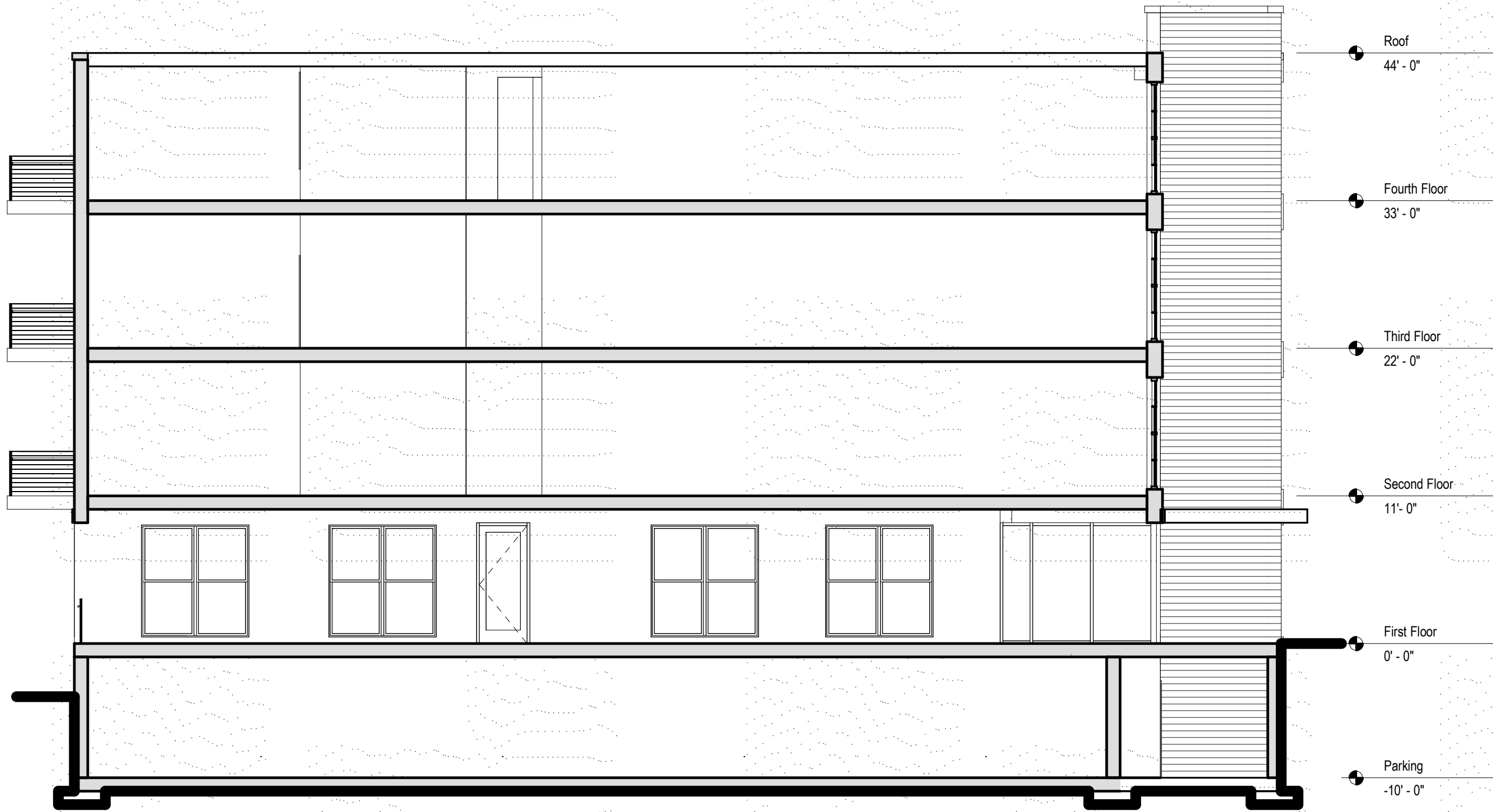
REVISIONS	
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5	DATE



REVISIONS	
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5	DATE



1 Site Section  
1/16" = 1'-0"



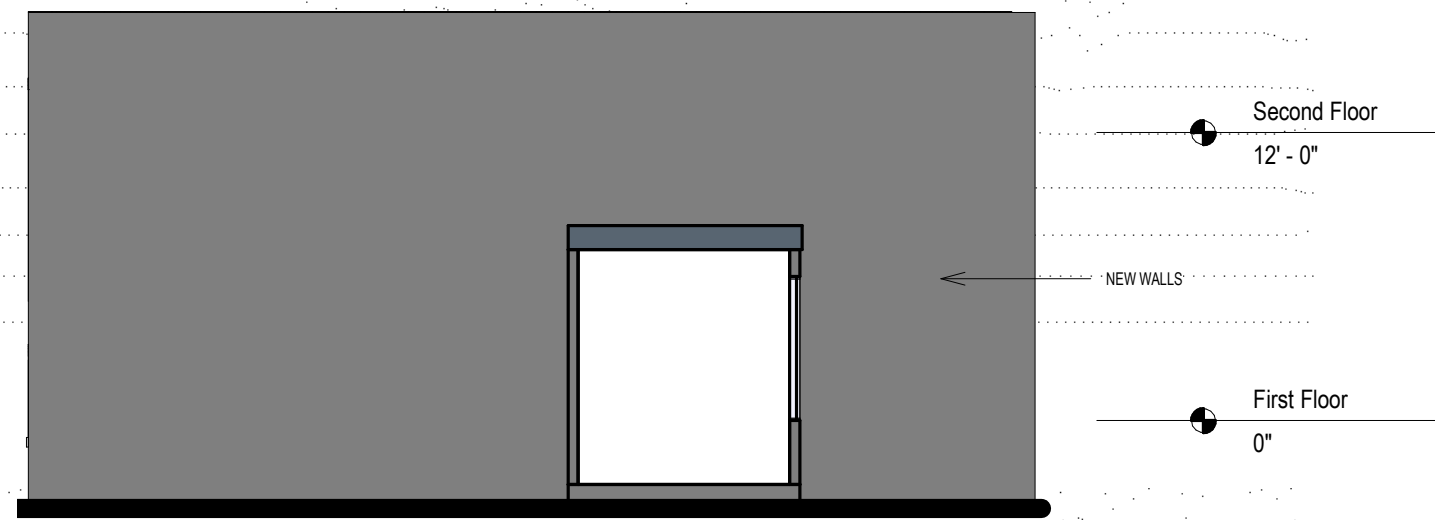
2 Building #2 Section  
1/8" = 1'-0"



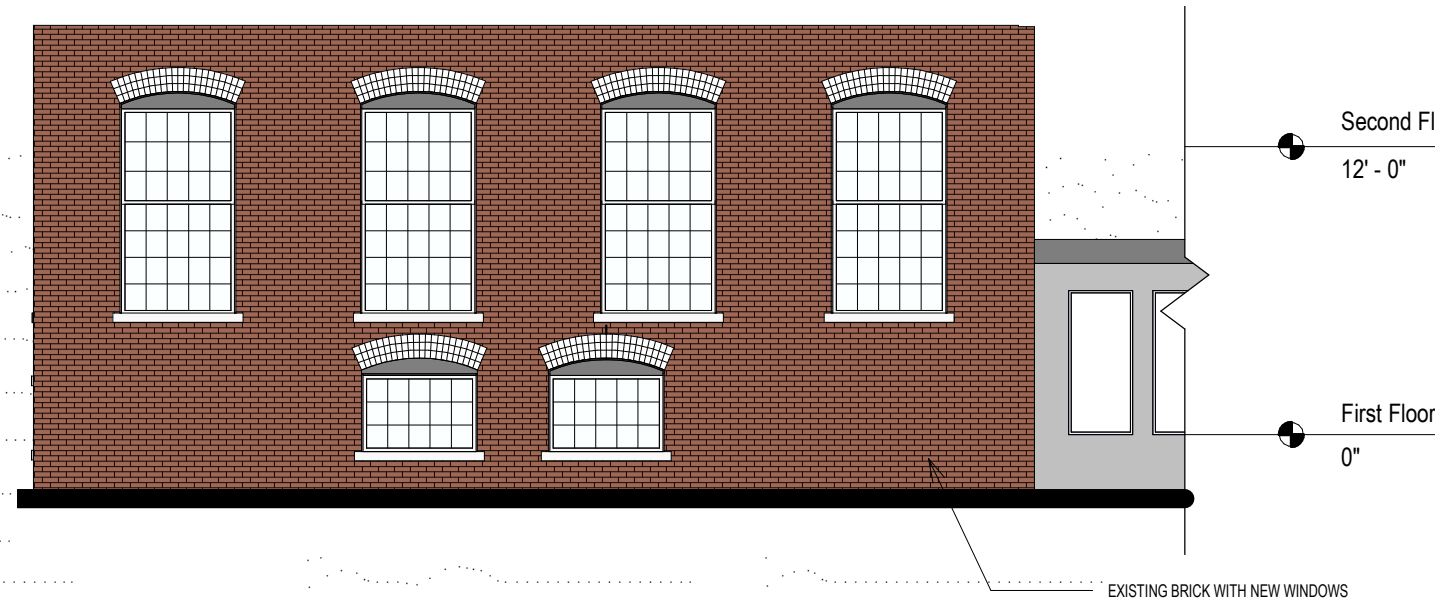
3 Building #3 South  
1/8" = 1'-0"



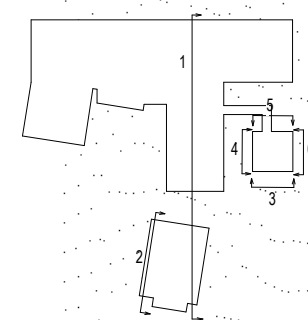
4 Building #3 West  
1/8" = 1'-0"



5 Building #3 North  
1/8" = 1'-0"



6 Building #3 East  
1/8" = 1'-0"







## Town of Arlington, Massachusetts

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### 1165R Massachusetts Avenue Correspondence

#### ATTACHMENTS:

Type	File Name	Description
Reference Material	P_Worden_1-4-21.pdf	P Worden 1-4-21
Reference Material	Zoning_Board_of_Appeals_Correspondence_2021_01_04.pdf	R Annese 1-4-21
Reference Material	subdivision_plan_1171_Mass_Ave.pdf	subdivision plan 1171 Mass Ave
Photograph / Image	IMG_2631.JPG	IMG_2631
Photograph / Image	IMG_2635.JPG	IMG_2635
Photograph / Image	IMG_2649.jpg	IMG_2649
Photograph / Image	IMG_2671.JPG	IMG_2671
Photograph / Image	IMG_2714.JPG	IMG_2714
Reference Material	Neighborhood_Feedback.pdf	Neighborhood Feedback
Reference Material	A_Tee_1-3-21.pdf	A Tee 1-3-21
Reference Material	Wynelle_Evans_1-5-21.pdf	Wynelle Evans 1-5-21
Reference Material	A_Butters_1-4-21.pdf	A Butters 1-4-21
Reference Material	Klein-O_Connor_12-30-20.pdf	Klein-O'Connor 12-30- 20
Reference Material	Russell_letter_12-30-20.pdf	Russell letter 12-30- 20.pdf



January 4, 2021

Testimony for January 5 Zoning Board of Appeals Hearing on Proposed Mirak  
40B project at 1165R Massachusetts Avenue

Dear Chairman Klein and members of the Zoning Board of Appeals,

There are so many defects in this project and mistakes and misrepresentations made by the proponents and whoever wrote Arlington's "letter of support on behalf of the Select Board of the Town of Arlington" to MassHousing (August 30, 2020) that the project itself merits swift rejection. The specified letter appears to have been written by someone who is unfamiliar with Arlington and ignorant of its policies recognizing only the rejected regional density aspirations of the Town Manager and Planning Director which are surprising in view of the fact that Arlington is already the second most dense town in Massachusetts. Given the distortions and inaccuracies in this planned project it is obvious that under no circumstances should the project be given any of the requested waivers. The obfuscatory nature of the project application is such that the Town Manager had a responsibility to advise Mr. Hurd that he should not have signed the specified letter.

For example, since the Annual Town Meeting of 2019 the Town has been working to ensure that the Industrial District will be developed for commercial and industrial uses and not residential. On this understanding Town Meeting voted in 2019 to approve \$70,000 funding for a recently completed study to facilitate commercial and industrial development in the district – certainly not residential development. Indeed, additionally, the ATM of 2019 voted overwhelmingly to allow No Action on zoning proposals for increased residential density promoted by ARB, Planning Dept, Town Manager and promoted by MAPC and CHAPA. Curiously at around the time that Mirak's 40B project appeared a mention of residential mixed use suddenly was slipped into the consultant's Industrial Report. With respect to this surprising insertion the Planning Director and her assistant orchestrated a most reprehensible display of interfering with statements of the public - who expressed opposition to residential uses in the Industrial District - at the public hearing on the subject last month.

We have Industrial zones for a reason. There are many potential businesses that simply do not mix well next door to homes. Conflicts over noise, smells, fumes, dust, etc are bound to arise. So we deliberately create buffers through such zoning.



Using 40B to bypass the No Residential restriction of an I Zone doesn't just remove that one tract from the commercial base of the town. 1165R sits in the middle of an I Zone. Sticking an apartment building in the middle directly impacts the development potential of the other lots.

Clearly Mirak Winchester heirs are trying to bypass the NO RESIDENTIAL restriction in industrial zones by using 40B statute designed by developers to circumvent local land protections in exchange for providing around 25% of barely affordable units. The rents are too high to address needs of our low-income residents and so will not prevent homelessness in the most needy. This 40B development with a large majority of unaffordable units is NOT consistent with Arlington's Master Plan which specifies that the only housing types Arlington needs are affordable and senior housing. In addition it is NOT consistent with MassHousing's Smart Growth Criteria which specifically advise: "Foster Sustainable business," and "Protect land and Ecosystems" which the plan's removal of trees will not help. With respect to Arlington's endeavors for a Clean Energy Future does the project satisfy Net Zero standards? Are solar power and renewable energy properly utilized? Are vehicles required to be electric and are there adequate charging stations?

In short, the Mirak heirs' plan is to convert two acres of Industrial zoned property to purely residential use. Presented as a 40B project, it is not subject to local zoning laws or many other regulations. The Miraks own much commercial property in town which may be headed for similar redevelopment destroying Arlington's plans to bring commerce, industry, jobs, internships, commercial taxes to Arlington. Taxes and school costs are escalating. Arlington's Planning and Economic Directors and Town Manager have not brought economic development to Arlington and are damaging its opportunities for such by supporting this 40B development. Why are they accepting very generous Arlington salaries while their work involves that for other entities—for example see the Arlington Town Manager's name on the Town of Foxboro's Housing Production Plan?

Tragically the 40B project will render futile the hope that Arlington can quickly take advantage of the tremendous potential of our Industrial districts because of our abutting Alewife district:

*With recent major deals and more on the way, West Cambridge's Alewife neighborhood has emerged as a life science cluster that any other city in the nation would love to claim as its own...*



See: <https://www.thedaviscompanies.com/life-science-growth-spurt-transforms-alewife/>

The needs of these industries include small start-up facilities, spin-offs in technology and life sciences and do not all require large campuses—one should remember the Wang computers started in Arlington. Some of this development is literally a stone's throw away from Arlington. Compare the Alewife numbers with Arlington rentals for such office/lab space that run at about \$30 per sf or less. Why can't we attract some of this business? The inaction of Arlington's Planning and Economic Directors to do so is unconscionable. I have expertise and advanced degrees in both molecular biology and medical sciences and see the loss to the community in terms of interesting jobs for residents, internships for our diverse body of black, brown, white students, and ability for more of our residents to work here in town as inestimable. The approval of the Mirak 40B project would ensure this loss.

The letter writer's suggestion that "This proposal has been undertaken in a cooperative manner with the town of Arlington and builds upon a long history of civic and philanthropic engagement and community involvement by the proponent" is simply not the case. Julia Mirak Kew is one of the Mirak heirs who lives in Winchester and certainly does not have the engagement with the community that the late John Mirak (a resident of Arlington) had. The mutually beneficial relationship between the late Jon Mirak and the town was obvious in the approval Town Meeting members gave for his zoning requests and his agreement at the request of Town preservationists not to destroy a historic house that he planned to remove. Instead of demolishing it he agreed to donate the house (Jefferson Cutter House now in Arlington Center) to the Town. At no time did he threaten the Town with a 40B project

Ms. Kew's involvement with Arlington includes her position as a member of the Chamber of Commerce where her activities might suggest possible conflict of interest. Instead of providing sufficient help to threatened restaurants or businesses she instead has tried unsuccessfully to promote zoning changes for increased residential density which would have enabled very lucrative opportunities for the Winchester Mirak heirs. This is surprising considering that Arlington is very dense and does not even have sufficient land for a new school (in fact because of this paucity of land AHS has to be rebuilt on its current lot at great inconvenience to its students and teachers). She even spoke at Arlington Town Meeting trying to persuade the members to make these zoning changes. Fortunately she did not



succeed. However, her current 40B project in Arlington (which was suddenly sprung upon the town with a tiny, local, poorly publicized meeting last year) will be ruinous for the economic development plans in the Industrial Zone for which Town Meeting has voted funding.

The letter's statements referring to "the many ways in which the project is consistent with goals and recommendations submitted relative to the site in the Arlington Master Plan, Housing Production Plan, Open Space Plan, and the Mill Brook Corridor Report." However, I can assure you that I can show the many ways in which the project is certainly NOT consistent with these reports and would be glad to do so at a more convenient time. I have familiarity with all of them. For example I attended every one of the many public meetings creating the Master Plan and I have read the Plan twice. Arlington is very close to satisfying the statutory 40B yardstick for affordable housing of 1.5% of buildable land area.

To their credit MassHousing did provide the opportunity for the Town officials to object to this proposal in the required *Comprehensive Permit Site Approval Application*. That document solicited comments from Arlington about any relevant concerns it might have and observations for determination as to whether the site is generally appropriate for residential development. However, apparently Town officials neglected to point out the inappropriate nature of the site for residential development and the fact that residential development is banned at that site.

If this 40B project is approved it would make the Town of Arlington complicit in *selling the Town down the river* to land hoarders, speculative developers and realtors who are interested only in exploiting the Town to milk it for the exorbitant profits currently available for residential development at huge economic and societal costs to Arlington. It will reward those, including land hoarders, landlords, and certain Town officials who have purposely inhibited the Town's economic and commercial development attempting instead to increase its density by building many thousands of residences despite, in some cases, inevitable displacements and evictions

In conclusion I respectfully request that the Zoning Board of Appeals investigate this project further and declines to endorse it thus preventing great harm to Arlington.

Patricia Barron Worden. M.A., Ph.D.

Former Chair, Arlington Housing Authority



Arlington Town Meeting member, precinct 8  
Former Chair, Arlington School Committee  
Former member, Permanent Building Committee  
Housing Plan Implementation Committee member  
Former Charter member, Human Rights Committee  
Former Secretary, Affordable Housing Task Force

Please include this testimony in the record of your meeting of January 5, 2021



**ROBERT J. ANNESE**

ATTORNEY AT LAW

VIA EMAIL: [zba@town.arlington.ma.us](mailto:zba@town.arlington.ma.us)

January 4, 2021

Christian Klein, R.A. Chair  
Zoning Board of Appeals  
Town of Arlington  
51 Grove Street  
Arlington, Massachusetts 02476

RE: Docket 3644

Dear Chair Klein:

I own the real estate located 1171 Massachusetts Avenue, which is directly impacted by the Applicant's proposal to construct 130 residential units at 1165R Massachusetts Avenue.

The 1165R Massachusetts Avenue is located behind my building and my building is occupied by my law office on the first floor and two small residential apartments on the second floor.

My property contains approximately 10,320 square feet.

The brief history of the property shows that the title to both my property and the Applicants of the 1165R Massachusetts Avenue property was derived through the Estate of Theodore Schwamb and subsequently passed to his daughter, Clara S. Peirce.

My building was built in 1845 and was occupied by the Schwamb family in and around the 1870's.

A subdivision plan was recorded at the Registry of Deeds on November 12, 1952 which essentially subdivided the property creating a 20-foot Right of Way benefiting my property and the Right of Way is shown on the plan, a copy of which accompanies this letter. See Subdivision Plan of T.F. Geary, Surveyor.



My title is currently shown as Lot C1 on a Deed recorded in Book 19038, Page 445 at Middlesex South District Registry of Deeds.

The use of my property has essentially not changed over many years since the building itself was constructed in 1845 i.e., it has been a residential use for more than 100 years and a mixed-use building for the last 60-70 years.

When I purchased the 1171 Massachusetts Avenue property, I never expected that there would be 130 residential units constructed at the 1165R Massachusetts Avenue property and that traffic access from that property would be over the 20-foot Right of Way, which I acquired when I purchased the property in 1988.

The 1165R Massachusetts Avenue property was occupied from the 1870's into the 1970's by the Theodor Schwamb Company which manufactured piano cases until the late 1920's and then architectural millwork, neither of which activities generated significant traffic through the Right of Way whether motor vehicle or otherwise.

Presently there is an automotive dealership located directly across from my property abutting the Right of Way owned by Yukon Realty Associates, LLC, which is an automotive dealership owned by a member of the Mirak family, who is not involved in the present Application.

That property was a gas station when I acquired my property in 1988 and there was no traffic emanating from the gas station down through the Right of Way, passing in front of my entrance to my parking lot.

Subsequently when that property was acquired by Yukon Realty Associates, LLC a Hyundai automobile dealership was constructed at the property.

The vehicles which occupy the automobile dealership lot all travel down the Right of Way before making a right turn to travel past proposed building #2 onto the Yukon Realty Associates, LLC's property located to the East of building #2.



The motor vehicles travel to the rear of the Hyundai property and are serviced and then brought back to the Yukon Realty Associates, LLC's property abutting the private way.

There have been many occasions when there have been near accidents as a result of vehicles leaving the automobile dealership, taking a right turn, traveling directly in front of the entrance to my parking lot which is only 20-feet or so away from the entrance to the Hyundai parking lot.

Motor vehicles leaving the automobile dealership lot do not go out on to Massachusetts Avenue but rather take the more expedient route of passing down the Right of Way before making a right turn to head toward the automobile dealership complex mentioned previously, owned by Yukon Realty Associates, LLC.

There is also a work bar building located directly behind my building which uses the Right of Way for both in and out automobile traffic, once again passing directly by the entrance/exit to my parking lot and the entrance/exit with respect to the automobile dealership on the other side of the Right of Way.

Yukon Realty Associates, LLC also has motor vehicle traffic which use the Right of Way unrelated to the automobile dealership with that traffic including trucks with respect to the property it owns to the East of proposed Building #2.

I have had to repair my sidewalk many times because of trucks, whether coming from the Yukon Realty Associates, LLC property or the 1165R Massachusetts Avenue property which have driven over my sidewalk, nearly hitting my building, as can be seen in photographs, which accompany this letter.

The volume of traffic which the Applicant proposes to funnel into the narrow Right of Way, even with the removal of the telephone pole which presently exists in the Right of Way is much more intensive than has been the case historically.



There is another access road being proposed for the project which is off of Forest Street which in turn leads to Ryder Street and then the so-called "Quinn Access Road" which further leads to Applicant's proposed buildings #1, #3, and #4.

My understanding is that the Applicant is proposing that all motor vehicles leaving the residential complex, drive out through the Right of Way impacting my property onto Massachusetts Avenue and that all motor vehicles entering the complex enter by way of the Forest/Ryder Streets and "Quinn Access Road".

It is also my understanding that there is no additional traffic use regarding the Forest/Ryder Streets and "Quinn Access Road" route, unlike the Right of Way which services my property which is accessed by multiple different businesses, including Mirak/Hyundai, The Work Bar, and other uses which Yukon Realty Associates, LLC may presently have or may have on their property in the future.

It is also interesting to note that the traffic impact report prepared for the Applicant was prepared on July 6, 2020, during the middle of the pandemic when traffic flow on Massachusetts Avenue and other roads within the Town was significantly decreased because of individuals not traveling to and from places of employment and elsewhere because of the pandemic.

Consequently, it would not be reasonable in my view to rely on the results of the traffic impact report with regard to traffic conditions because of when the traffic study was performed and prepared.

The only true test of any motor vehicle traffic impact study as a result of the Applicant's proposal to construct 130 residential units at their property would be to view the traffic pattern situation once the pandemic is over and motor vehicle use returns to pre-pandemic road conditions.

It is also interesting to note that the development will consist of 130 apartment units, with 139 parking spaces proposed while the Zoning Bylaw at Article 6, Section 6.1.4 would require 171 parking spaces. Where is the additional motor vehicle parking which it is reasonable to conclude will be generated by occupants



of the studio, one-bedroom, two-bedroom, and three-bedroom residential units going to be provided for with respect to those additional vehicles?

Are those excess motor vehicles going to park on streets where overnight parking is not allowed? Am I going to be monitoring my parking lot to be sure the excess vehicles do not park in my parking lot which services two residential units and my office unit?

The Applicant is also proposing a waiver from Bylaw Article 5, Section 5.6.2, i.e., the floor area ratio section which provides for an FAR of 1.5 and other requirements.

The proposal of an FAR of 2.37 which will make for an intensive use of the prior relatively passive and less intensive use of the Right of Way which can only contribute to traffic and safety issues relating to the Right of Way and excess parking and congestion issues.

The legal issue with respect to the Applicant's proposal as it relates to the Right of Way which benefits my property at 1171 Massachusetts Avenue is whether the proposal results in an overburdening of the Right of Way and in my view the answer is decidedly yes.

There is no reason why the Applicant cannot have both in and out traffic from its proposed residential complex through the Forest/Ryder Streets and "Quinn Access Road" route where there is not the intensity of use as there is with respect to the Right of Way abutting my property.

There would be no likelihood of vehicles existing the Mirak/Hyundai dealership or vehicles traversing the right of way from interfering with my use of my parking lot both with respect to any accident occurring resulting in property damage and/or personal injury to individuals if this access route is used.

If the use of an easement is overly intensive it could result in the overburdening of a Right of Way as was the case with a proposed 41 Lot subdivision which had the



benefit of a reserved way, but the Court concluded that the increased use made of the way/ways would be an overburden of any easement rights in the Right of the Way. See Boudreau v. Coleman, 29 Mass. App. Ct. 621, 564 N.2d 1 (1990). 130 residential units will generate far more vehicle traffic than a 41-lot residential subdivision. See also, Parker, et al. v. Freedman, MISC 14-488513, SPEICHER, J. (2016) for a Land Court Judge's discussion relating to overburdening of a Right of Way.

For all of the above reasons, I respectfully request that the Members of the Zoning Board deny any request for a permit to use the Right of Way abutting my property whether for traffic to the residential complex or traffic leaving the residential complex and that an alternative approach be taken by the Applicant so that my rights to use the Right of Way are not overburdened and particularly so when I had no reasonable expectation when I purchased my property in 1988 that in addition to the traffic volume that would emanating from the then potential use of both the 1165R Massachusetts Avenue and the Yukon Realty Associates, LLC's property that 130 residential units would be constructed at the 1165R Massachusetts Avenue property with the residents of those units being allowed to use the Right of Way whether for in or out access or both.

Very truly yours,



Robert J. Annese

RJA:lm

Enclosures



Sub Division Plan  
of Land in

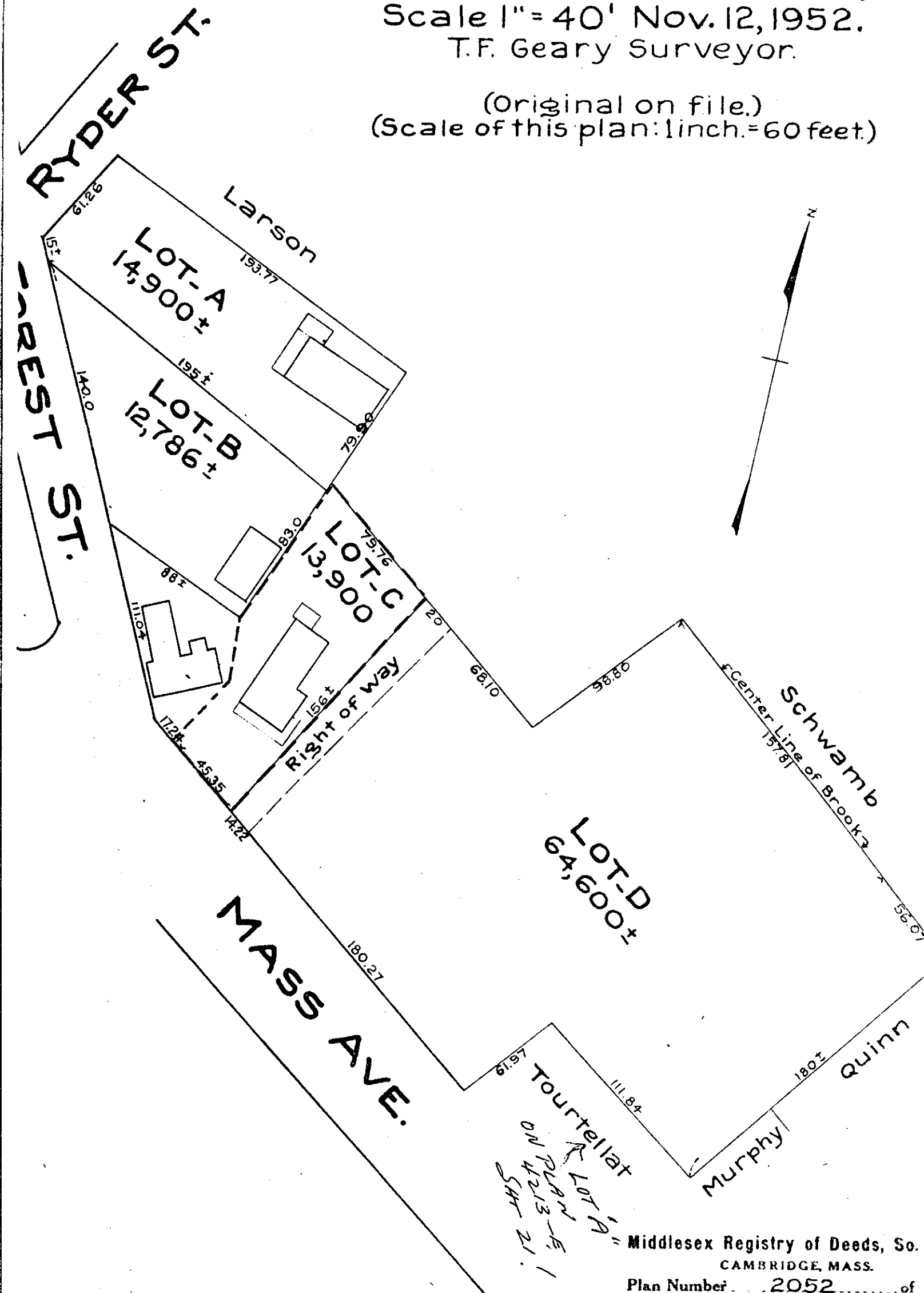
ARLINGTON MASS.

Scale 1" = 40' Nov. 12, 1952.

T.F. Geary Surveyor.

(Original on file.)

(Scale of this plan: 1 inch = 60 feet.)



Middlesex Registry of Deeds, So.  
CAMBRIDGE, MASS.

Plan Number 2052 of  
Rec'd. Nov. 24, 1952 at 1.40m  
with Deed

W. Theodore Reince  
Ernest W. Larson et.

Recorded, Book 7998 Page 88























Neighborhood Feedback

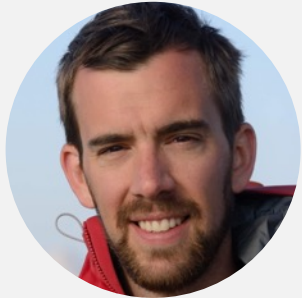
# 1165 R Mass

Community feedback from Ryder Street & Beck Road residents for Zoning Board of Appeals meeting on January 5<sup>th</sup>, 2021



# Personal Impact

Putting a face to the feedback.



## Alex Tee & Family

4<sup>th</sup> and 5<sup>th</sup> Generation Arlington Residents

My name is Alex, and I have been living at 2 Ryder Street with my family for the past 7-years.

This quirky corner of town has been a delightful place to settle down with a tight knit community of neighbors and family run businesses.

While I am cautiously optimistic about the prospects of new neighbors, I do have concerns that it could threaten the safety of those in this community if not approached in an inclusive and integrative manner.

This document represents a good faith effort to collaborate with the town and developers as we have not yet had an opportunity to meaningfully contribute to making this a successful development for all parties.



# Prioritized Topics

## Concerns and considerations for 1165 Development

### Traffic Burden

(Health & Safety)

Our neighborhood is already a disorganized yet heavily utilized thoroughfare for commercial and community.

Increasing the strain on this infrastructure that has not been intentionally designed to support this mixed-use traffic could have dangerous consequences.

We would like to understand why access to Ryder street is necessary at all, and what will be done to mitigate the concern.

### Property Protections

(Infrastructural Integrity and Value)

A project of this scale could not only disrupt our neighborhood during construction, but permanently alter the neighborhood itself.

We would like to discuss specific concerns we have about the potential disproportionate impact this project may have and how those will be considered in the design and development process, which to date has not included our input.

### Conscientious Inconvenience

(Daily Impact For Our Area)

Understanding how the property will mitigate daily impact during construction and contribute their share to the upkeep and maintenance of the private way is important to understand before granting approval.



# Our Front Step Today

Where else do you encounter this mix of use cases without any safety infrastructure in place?

## Traditional Traffic

Car traffic is a given, and unsafe drivers and conditions are certain to happen anywhere you find cars.

Unlike traditional roads, where professional design guidelines and enforcement are assumed, our free-for-all parking lot layout does nothing to promote safety and control flow.



## Middle School Highway

During a normal school year, there will be a steady stream of middle schoolers coming off Turkey Hill and making their way up Ryder Street in the morning and then back home early afternoon.

With no clear pedestrian path to guide them, they wander throughout the street, horsing around 4-across or walking alone with headphone on oblivious to the truck behind them.

## Commercial Equipment

It's never a dull moment with 18-Wheelers, Teams of Landscape Trucks and Trailers, Front-End Loaders, Bobcats, Contractor Vans, Moving Trucks, Plows, Cranes rushing to their next job.

While this activity has always been here, the relocation of the DPW is putting additional strain on our neighborhood.

## Bike Path On-Ramp

Throughout the week you can find bikers, strollers, roller-bladers of all ages traversing down Ryder Street to access the bike path.

These users, especially children, are vulnerable as cars have a blind left turn out of the proposed development area, with their drivers being distracted looking both ways for traffic of different sorts.

## Close Calls

Our Personal Experiences

**Late For School** – A panicked parent with kids who are already late for school flew through our street at 40mph to avoid the traffic backup at the Forest Street and Mass Ave, almost hitting a pedestrian in the process.

**Brushed Off** – This fall, a driver was distracted trying to squeeze around a log jam of traffic, and brushed my wife who was gardening, pinning her to the garden bed without even realizing it.

**Unloading Groceries** – Three weeks ago I was double parked unloading groceries into our home when a DPW truck sped by coming within 3 inches of hitting me and my car.

**Texting & Turning** – A car turning out of the mill building turned wide to avoid slowing down and nearly struck our stroller, which was thankfully empty, all while texting.



# Our Front Step Today

Where else do you encounter this mix of use cases without any safety infrastructure in place?





# Why Is Vehicle Access to Ryder Street Absolutely Necessary?

While the development did not create the problem, why risk making it worse?

## Why does the development need a 2<sup>nd</sup> access point?

If the developers of this property have been successful without this condition on past projects, then why is it necessary to burden our neighborhood with this request?



*"A lot of projects this size live with one curb cut on a street like Mass Ave"*

- Daniel St. Clair



*"A lot of people were concerned with Legacy...which is in a more congested area...but there haven't been any problems"*

- Julia Mirak



# Right of Way vs. Ownership

Consider the disproportionate burden on the neighboring abutters.

## As Proposed

The graphic presented below during the June 24<sup>th</sup> meeting is misleading as the property does not have ownership over portion of land on Ryder Street as shown below.



## Property Map

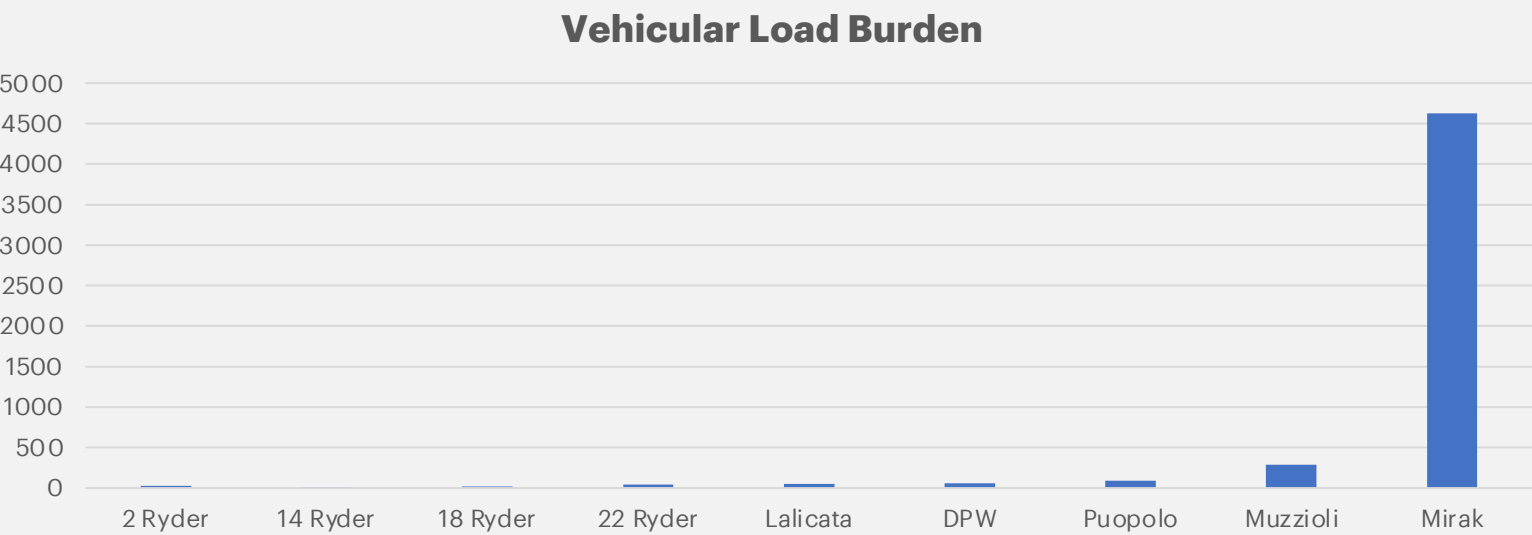
The graphic presented below during the June 24<sup>th</sup> meeting is misleading as the property does not have ownership over the land shown in yellow.





# Quantifying The Disproportionate Burden

Highlights severe inequity in usage.



### Assumptions

Property	Frontage	% Frontage	# Cars	Burden Factor
2 Ryder	47	15%	4	27
14 Ryder	23	7%	1	14
18 Ryder	28.5	9%	2	23
22 Ryder	20.5	6%	3	47
Lalicata	60	19%	10	54
DPW	56	17%	10	58
Puopolo	14.3	4%	4	90
Muzzioli	22.2	7%	20	290
Mirak	16	5%	230	4629

Frontage Estimated From Google Earth in Meters  
Total Frontage 322

### Costs

Not only does traffic impact our quality of life (noise, air, safety), but it also impacts the street itself.

In 201X, the abutters to Beck road pooled their resources and paid for repaving at their own expense.



# How has your current design considered these factors?

Have you explored any of the following options?

## Only Bike/Pedestrian Access From Ryder St.

Opportunity to build a portion of Arlington's vision for a streamside park.

## In-Bound Access Only

Remove the risk factor of a car turning onto Ryder Street and hitting a pedestrian due to confusion of uncontrolled traffic flows and blind spots.

## Speed Control

Introduce features to better control speeds to and from the development.

- Stop Signs
- Interactive Speed Limit Signs
- Speed Humps
- Narrow Lanes
- Curb Extensions
- Jogs In Roadway

## Infrastructure Improvements

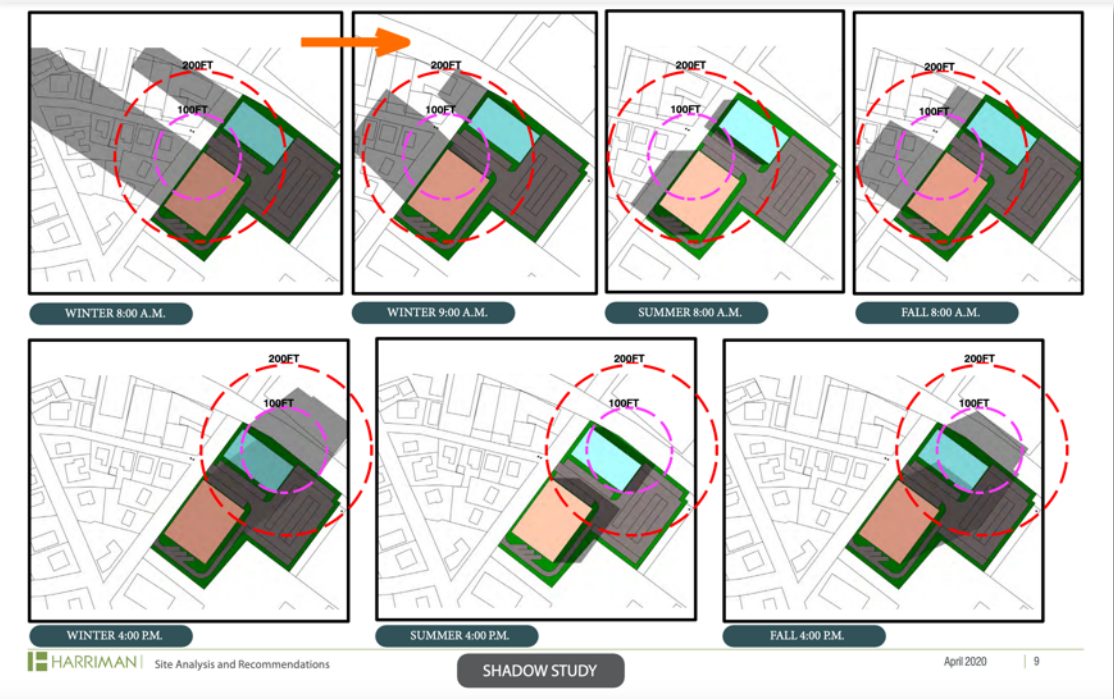
Finance the design and improvement of Ryder Street itself to better accommodate both volume and types of traffic.

- Elevated & Continuous Sidewalk from Forest St to Bike Path
- Delineated Bike Lane
- [Shared Street Design](#)



# Could our neighborhood be subjected to TWO developments?

How does zoning account for the potential of both developments?



## Shadow Study

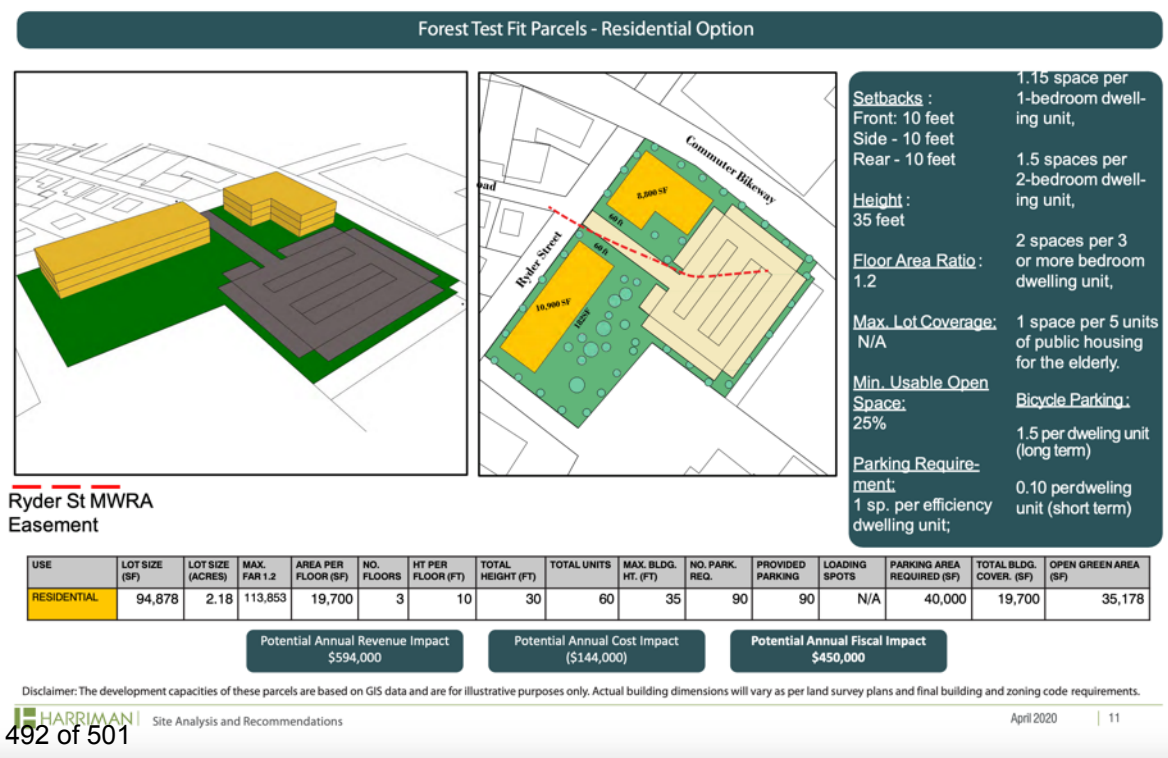
How will this new development compare to the shadow study above as the current designs show an even more imposing structure?

<https://www.arlingtonma.gov/home/showdocument?id=51128>

## Integrative Design

Has any forethought been made on how these properties co-exist, or are we going to be subjected to the results after the fact?

Pushing the buildings right up against Ryder St is imposing and could create oppressive experience for pedestrians on way to bike path.





# Property Protections

Have you explored any of the following considerations?

## Damage During Construction

How will developers protect our homes during construction?

- Our home has been damaged three times when trucks failed to make turn between the development site and Ryder.
- Will the developers provide engineering services and strain gauges on our foundations to assess any damage due to construction?
- Is there an opportunity to temporarily or permanently gain access through adjacent Mirak property to minimize disruption to our confined residential street?
- Provide regular street sweeping to remove construction debris (nails) & dust?

## Light & Noise Pollution

What can we expect in terms of light and noise pollution once the building is occupied?

- Installation of mature large-format trees around property
- Downwash lighting vs. invasive spotlights
- Outdoor congregating areas on north and east sides away from residential neighborhoods.

## Property Value Impact

Has a study been conducted to understand abutters property valuations once an apartment complex is in place?

## Flood Zone Study

How might this development impact the areas flood-zone rating, as we are already at high risk as evidenced by rapidly increasing insurance rates, and the previous owners of our property witnessed flooding on that property years ago.



# Conscientious Inconvenience

Once built, how will the property manager commit to stewardship of neighborhood?

## Parking

How will the development accommodate overflow and guest parking, and enforce parking restrictions on adjacent properties, as Ryder St is already over capacity much of the year?

- Parking Surveillance/Towing

## Infrastructure Investments

Will funds be set aside to re-invest in the abutting infrastructure to a level that represents the developments impact on the neighboring areas?

- Repaving Costs
- Street Sweeping/Plowing

## Community Inclusiveness

What consideration has been given to providing more meaningful 'affordable income' rates as the minimum commitment in 40B requirements still excludes a wide range of potential residents?



Good Evening Christian.

Thank you for informing my community about the upcoming Zoning Board Meeting on the proposed development at 1165 Mass Ave, as we've been hoping for more feedback since the initial community meeting in June of 2020.

While there are many aspects to consider with a development of this scale, in an area as complex and in-flux as Ryder Street, there are three main topics that I'd appreciate being considered:

1. **Safety:** Ryder Street today is already an incredibly challenged and dangerous environment from a traffic standpoint. The mix of uses, from heavy machinery and rushing commercial trucks to packs of wandering middle schoolers and kids learning to ride their bikes is a dangerous recipe, even before you consider the fact that our street is a glorified parking lot with no design controls in place. Why we would consider exacerbating this problem with additional traffic, when no clear need has been stated is something I would like to clarify before someone gets hurt.
2. **Concurrent Developments:** I noticed [this](#) report on-line which highlighted another prospective development on the adjacent Lalicata property. Either one of these developments alone would constitute a big impact to the neighborhood but both could overwhelm and disproportionately burden our tiny neighborhood if not considered in total. While we welcome many of the ideas put forth in that vision document, we want to understand how these two developments are coordinating both with one another, AND with the abutting residents to ensure that the design accommodates and accounts for all needs.
3. **Stewardship:** Progress is not painless, and we certainly expect some level of disruption to our neighborhood as these projects get developed, but that burden gets to be shared and it's important for me as a neighbor to understand how my property value and daily life will be protected before, during and after this development. I'll spare you the list of specific concerns here, but did share them in the attached document, along with some additional detail around my previous two concerns.

Being new to the zoning/permitting process I'm not sure how many of these topics are pertinent to Tuesday's meeting, but wanted to share them in advance as my community is very nervous not just about the impact itself, but being steamrolled in the process, as we have yet to feel heard and included in the design itself.

It's my hope that we can find a way to collaborate and make this neighborhood a community gateway and collecting point for Arlington's wonderful resources, including its people.

Thank you in advance for your consideration and please don't hesitate to reach out if you have any questions, thoughts or concerns.

Look forward to meeting you virtually on Tuesday.

Sincerely,  
Alex



## **Re: Proposed Mirak Project at 1165R Massachusetts Avenue**

Dear Mr. Klein, and members of the Zoning Board of Appeals:

I'm writing to you about the proposed Mirak 40B project at 1165R Massachusetts Avenue, the industrially zoned mill building complex behind Mirak Hyundai. Please add my comments to the record for the meeting on this subject scheduled for Tuesday, January 5, 2021.

The Town recently commissioned a study of our industrial and commercial districts, undertaken by Harriman and RKG Associates. Their recommendations for these districts emphasize light manufacturing, office space, breweries, maker spaces, artists' work spaces, etc., all indicated as fostering economic development. Limited residential use has only been mentioned in minuscule footnotes.

Contrary to the overall recommendations of the study, the Mirak project proposes a solely residential development, with approximately 32 affordable units, exempted from most input from the Town by its 40B status. The addition of any affordable housing is a boon to the town, of course. But it means driving a stake into the heart of the largest remaining industrial district in Arlington. This project will mean the end of the current commercial and light industrial use at that location, and will create an island of housing surrounded by business uses. Given the reluctance of industrial concerns to abut residential neighborhoods, it's not hard to imagine the pressures to eventually convert the rest of the parcels to residential use, as well.

We should mourn the loss of an opportunity to create something truly innovative for Arlington and surrounding communities.

The Mirak Innovation Park is that in name only. Imagine if it were that in reality, and this project were the beginning of a re-thinking of the entire block of parcels, with light industrial and commercial uses, artists' live-work spaces, restaurants, small retail businesses, a boutique hotel, perhaps a performance space. Imagine including a small museum/learning space to showcase the history of the mills and other, earlier businesses in Arlington, and also provide a link to Arlington's section of the Battle Road, a prime tourism draw waiting to be brought to life. Imagine looking at this location through a different lens, leveraging its location on the Mass. Ave. bus line and the Bike Path, its quick access to Rt. 2 and the Red Line, and its ample room for parking and a variety of structures.

Imagine something along the lines of these developments:

Charles River Speedway  
<https://charlesriverspeedway.com>

The Brewery in Jamaica Plain  
<https://jpndc.org/brewery/>

1 Westinghouse Plaza in Hyde Park  
[http://www.thewestinghouselofts.com/TheWestinghouseLofts/Businesses at Westinghouse.html](http://www.thewestinghouselofts.com/TheWestinghouseLofts/Businesses_at_Westinghouse.html)

P & G Boston  
<https://boston.pglocations.com>

Or imagine this site as a life sciences campus, such as Lexington, Waltham, Watertown and other communities are welcoming:



The Linx in Watertown

<https://www.linxwatertown.com/toc.cfm>

Multiple locations

<http://kingstreetproperties.com>

The Miraks have a long-standing relationship with Arlington, including many philanthropic acts that have benefited the town over the years. This site presents great opportunities for them, which could also offer much more for our town than does the current proposal.

— Has anyone in our Department of Planning and Community Development discussed alternatives with the Miraks?

The buildings currently hold a mix of artists and small businesses.

— What is the plan for their relocation?

Again, the Economic Analysis of Industrial Zoning Districts only recommends limited residential conversion in industrial districts, and only as part of mixed-use structures.

— What kinds of protections will the Town require for the remaining surrounding areas to prevent their conversion to residential use?

In sum, it's a shame to sacrifice this prime spot to solely residential use. The Analysis found that 93% of Arlington residents who work commute out of town to their jobs. Arlington is becoming a sleepy and very expensive bedroom community, while other communities around us are thinking creatively and transforming under-utilized sites into hubs that provide the kinds of amenities and jobs that enrich their residents' lives, draw visitors, and revitalize their faded business districts.

We can and should aim much higher.

I'd appreciate hearing discussion of my questions at Tuesday night's meeting. Thank you for your attention to this issue, and best wishes to all for a healthy, happy New Year.

Sincerely,

Wynelle Evans

-----

Wynelle Evans

20 Orchard Place

Arlington, MA 02476

781.643.4547 office

781.859.9291 mobile

[evco7@rcn.com](mailto:evco7@rcn.com)



I am opposed to the construction of 130 units @1165R Mass Ave

I feel it will cause so much congestion of cars and people in the area, it will be a huge disruption in the neighborhood causing so much noise during construction and will impact my sleep schedule. There was a truck out here the other day a drilling company checking stuff in the parking lot - it not only woke us up it stayed there for a long time and the constant noise was annoying. This is the second time they have sent someone here and creating unpleasant noise, I can't imagine how awful it will be on a daily basis with the amount of vehicles in the area during a long process of the construction.

PLEASE veto this application!!



From: "Christian Klein" <CKlein@town.arlington.ma.us>  
To: "Mary O'Connor" <moconnor@koilaw.com>  
Cc: "Patrick Hanlon" <phanlon@town.arlington.ma.us>, "Zoning Board of Appeals" <ZBA@town.arlington.ma.us>, "Douglas Heim" <DHeim@town.arlington.ma.us>, "Jenny Raitt" <JRaitt@town.arlington.ma.us>, "Paul Haverty" <paul@bbhlaw.net>  
Date: Wed, 30 Dec 2020 15:25:41 -0500  
Subject: Re: 1165R Massachusetts Avenue

Mary,

I finished my call regarding the plan for next Tuesday's hearing. I would like the Applicant to make a 20-25 minute presentation at the January 5 meeting, touching on the major aspects of the project. The Board will schedule several hearings to discuss the specifics of the project, so we are just looking for a general introduction at this time. The meeting will be conducted over Zoom, and we can give your team control of the screen for its presentation.

We plan to start the meeting with a brief introduction to the 40B process for the general public. Doug Heim will then comment on any local aspects of the hearing process. I would then ask you to introduce yourself and the Applicant's team, followed by their presentation. I will ask for questions and comments from the Board and from town officials. I will then open the hearing for a period of public comment and questions.

After the public comment period is closed, the Board plans to discuss the following topics:

- Review of the timeline from application to decision
- Acceptance of the application
- Incorporation of minutes from working sessions held by other town boards and commissions
- Request for consultant fees from the Applicant under 53G
- Conducting an application completeness review
- Possible declaration of Safe Harbor status
- Schedule for future hearings
- Discussion of logistics for holding a site tour
- Continuance to a certain date and time

If you have any questions or concerns, please let me know. The Board is looking forward to a productive start to the review of this well prepared project.

Sincerely,

Christian Klein  
Chair, Arlington ZBA  
cklein@town.arlington.ma.us

From: Mary O'Connor <moconnor@koilaw.com>  
To: Christian Klein <CKlein@town.arlington.ma.us>  
Date: Wed, 30 Dec 2020 14:50:18 +0000  
Subject: 1165R Massachusetts Avenue

**CAUTION:** This email originated from outside of the Town of Arlington's email system. Do not click links or open attachments unless you recognize the REAL sender (whose email address in the From: line in "< >" brackets) and you know the content is safe.



Good Morning Christian,

I wanted to follow up to see if you have decided how you would like to proceed on Tuesday, January 5<sup>th</sup>. It is a short week so I would need to give the professionals who you may want to present notice. Thanks and Happy New Year. Mary

Mary Winstanley O'Connor, Esq.  
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[www.koilaw.com](http://www.koilaw.com)



Hi

My name is Russell and I am one of the residents living on Ryder St in Arlington Ma.

I would like to express concerns on the construction of a one hundred and thirty dwelling unit development at 1165 R Mass Ave:

Is the access to the dwelling building through the private street Ryder st? If it is, it will further burden the traffic and available street parking space on Ryder st. We as residents are having troubles finding parking sometimes on this private street and I have heard that the new developments will require tenants to pay additional fee on parking at the premise. This could worsen the parking situation at Ryder St;

Further more, the road condition of Ryder street is not very smooth given its narrow entrance and bumpiness. Increasing traffic around the area will certainly worsen the road condition and increase the chance of accidents.

Thank you,

Russell